

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1208DXJ

PASSWORD:

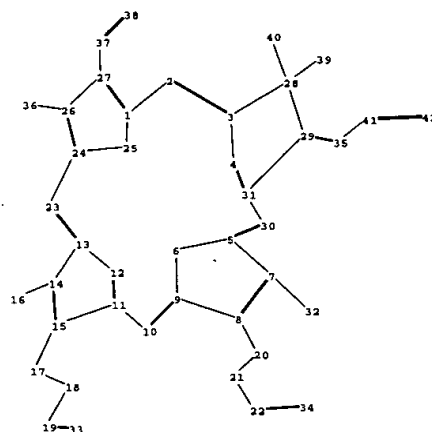
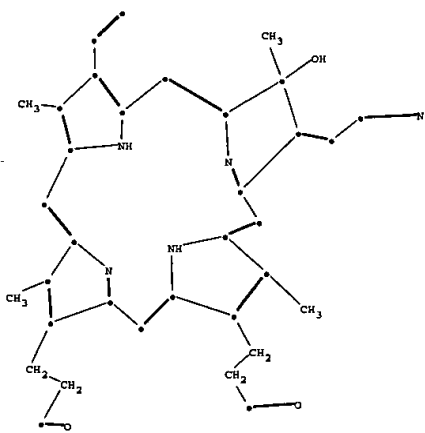
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
 NEWS 2 Apr 08 "Ask CAS" for self-help around the clock
 NEWS 3 Apr 09 BEILSTEIN: Reload and Implementation of a New Subject Area
 NEWS 4 Apr 09 ZDB will be removed from STN
 NEWS 5 Apr 19 US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
 NEWS 6 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
 NEWS 7 Apr 22 BIOSIS Gene Names now available in TOXCENTER
 NEWS 8 Apr 22 Federal Research in Progress (FEDRIP) now available
 NEWS 9 Jun 03 New e-mail delivery for search results now available
 NEWS 10 Jun 10 MEDLINE Reload
 NEWS 11 Jun 10 PCTFULL has been reloaded
 NEWS 12 Jul 02 FOREGE no longer contains STANDARDS file segment
 NEWS 13 Jul 22 USAN to be reloaded July 28, 2002;
 saved answer sets no longer valid
 NEWS 14 Jul 29 Enhanced polymer searching in REGISTRY
 NEWS 15 Jul 30 NETFIRST to be removed from STN
 NEWS 16 Aug 08 CANCERLIT reload
 NEWS 17 Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN
 NEWS 18 Aug 08 NTIS has been reloaded and enhanced
 NEWS 19 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE)
 now available on STN
 NEWS 20 Aug 19 IFIPAT, IFICDB, and IFIUDB have been reloaded
 NEWS 21 Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded
 NEWS 22 Aug 26 Sequence searching in REGISTRY enhanced
 NEWS 23 Sep 03 JAPIO has been reloaded and enhanced
 NEWS 24 Sep 16 Experimental properties added to the REGISTRY file
 NEWS 25 Sep 16 CA Section Thesaurus available in CAPLUS and CA
 NEWS 26 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985
 NEWS 27 Oct 21 EVENTLINE has been reloaded
 NEWS 28 Oct 24 BEILSTEIN adds new search fields
 NEWS 29 Oct 24 Nutraceuticals International (NUTRACEUT) now available on STN
 NEWS 30 Oct 25 MEDLINE SDI run of October 8, 2002
 NEWS 31 Nov 18 DKILIT has been renamed APOLLIT
 NEWS 32 Nov 25 More calculated properties added to REGISTRY
 NEWS 33 Dec 02 TIBKAT will be removed from STN
 NEWS 34 Dec 04 CSA files on STN
 NEWS 35 Dec 17 PCTFULL now covers WP/PCT Applications from 1978 to date
 NEWS 36 Dec 17 TOXCENTER enhanced with additional content
 NEWS 37 Dec 17 Adis Clinical Trials Insight now available on STN
 NEWS 38 Dec 30 ISMEC no longer available
 NEWS 39 Jan 13 Indexing added to some pre-1967 records in CA/CAPLUS
 NEWS 40 Jan 21 NUTRACEUT offering one free connect hour in February 2003
 NEWS 41 Jan 21 PHARMAML offering one free connect hour in February 2003
 NEWS 42 Jan 29 Simultaneous left and right truncation added to COMPENDEX,
 ENERGY, INSPEC

NEWS EXPRESS January 6 CURRENT WINDOWS VERSION IS V6.01a,
 CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
 AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002

NEWS HOURS STN Operating Hours Plus Help Desk Availability



chain nodes :

16 17 18 19 20 21 22 32 33 34 35 36 37 38 39 40 41 42

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 23 24 25 26 27 28 29 30 31

chain bonds :

7-32 8-20 14-16 15-17 17-18 18-19 19-33 20-21 21-22 22-34 26-36 27-37 28-39
28-40 29-35 35-41 37-38 41-42

ring bonds :

1-2 1-25 1-27 2-3 3-4 3-28 4-31 5-7 5-6 5-30 6-9 7-8 8-9 9-10 10-11 11-12
11-15 12-13 13-14 13-23 14-15 23-24 24-25 24-26 26-27 28-29 29-31 30-31

exact/norm bonds :

1-25 3-28 5-6 6-9 11-15 13-14 14-15 19-33 22-34 24-25 28-29 28-39 29-31 41-42

exact bonds :

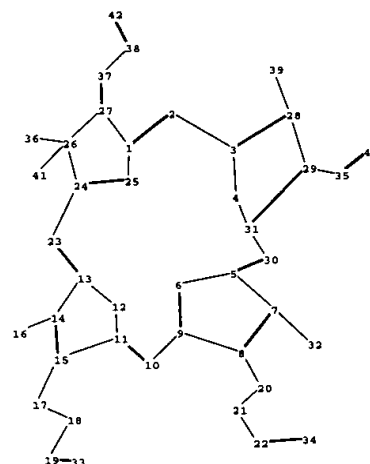
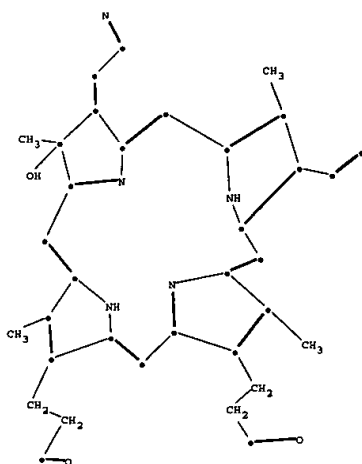
7-32 8-20 14-16 15-17 17-18 18-19 20-21 21-22 26-36 27-37 28-40 29-35 35-41
37-38

normalized bonds :

1-2 1-27 2-3 3-4 4-31 5-7 5-30 7-8 8-9 9-10 10-11 11-12 12-13 13-23 23-24
24-26 26-27 30-31

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:Atom 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS
21:CLASS 22:CLASS 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:Atom
31:Atom 32:CLASS 33:CLASS 34:CLASS 35:CLASS 36:CLASS 37:CLASS 38:CLASS 39:CLASS
40:CLASS 41:CLASS 42:CLASS



chain nodes :

16 17 18 19 20 21 22 32 33 34 35 36 37 38 39 40 41 42

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 23 24 25 26 27 28 29 30 31

chain bonds :

7-32 8-20 14-16 15-17 17-18 18-19 19-33 20-21 21-22 22-34 26-36 26-41 27-37
28-39 29-35 35-40 37-38 38-42

ring bonds :

1-2 1-25 1-27 2-3 3-4 3-28 4-31 5-7 5-6 5-30 6-9 7-8 8-9 9-10 10-11 11-12
11-15 12-13 13-14 13-23 14-15 23-24 24-25 24-26 26-27 28-29 29-31 30-31

exact/norm bonds :

1-27 3-4 4-31 5-7 7-8 8-9 11-12 12-13 19-33 22-34 24-26 26-27 26-41 38-42

exact bonds :

7-32 8-20 14-16 15-17 17-18 18-19 20-21 21-22 26-36 27-37 28-39 29-35 35-40
37-38

normalized bonds :

1-2 1-25 2-3 3-28 5-6 5-30 6-9 9-10 10-11 11-15 13-14 13-23 14-15 23-24 24-25
28-29 29-31 30-31

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:Atom 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS
21:CLASS 22:CLASS 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:Atom
31:Atom 32:CLASS 33:CLASS 34:CLASS 35:CLASS 36:CLASS 37:CLASS 38:CLASS 39:CLASS
40:CLASS 41:CLASS 42:CLASS

NEWS INTER General Internet Information
 NEWS LOGIN Welcome Banner and News Items
 NEWS PHONE Direct Dial and Telecommunication Network Access to STN
 NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 13:58:39 ON 30 JAN 2003

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.42	0.42

FILE 'REGISTRY' ENTERED AT 13:59:46 ON 30 JAN 2003

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 28 JAN 2003 HIGHEST RN 482573-45-5

DICTIONARY FILE UPDATES: 28 JAN 2003 HIGHEST RN 482573-45-5

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNnote 27, Searching Properties in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>Testing the current file.... screen

ENTER SCREEN EXPRESSION OR (END):end

=> screen 966 AND 1006

L1 SCREEN CREATED

=> screen 1821 OR 1822 OR 1823 OR 1824

L2 SCREEN CREATED

=>

Uploading C:\STNEXP4\QUERIES\889698b.str

L3 STRUCTURE UPLOADED

=> que L3 AND L1 AND L2

L4 QUE L3 AND L1 AND L2

=> d

L4 HAS NO ANSWERS

L1 SCR 966 AND 1006

L2 SCR 1821 OR 1822 OR 1823 OR 1824

L3 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L4 QUE ABB=ON PLU=ON L3 AND L1 AND L2

=> s l4

SAMPLE SEARCH INITIATED 14:00:11 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 5 TO ITERATE

100.0% PROCESSED 5 ITERATIONS

1 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 5 TO 234

PROJECTED ANSWERS: 1 TO 80

L5 1 SEA SSS SAM L3 AND L1 AND L2

=> s l4 full

FULL SEARCH INITIATED 14:00:16 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 108 TO ITERATE

100.0% PROCESSED 108 ITERATIONS

11 ANSWERS

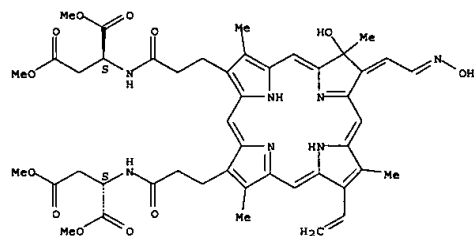
SEARCH TIME: 00.00.01

L6 11 SEA SSS FUL L3 AND L1 AND L2

=> d scan

L6 11 ANSWERS REGISTRY COPYRIGHT 2003 ACS
 IN L-Aspartic acid, N,N'-[(13-ethenyl-7,8-dihydro-7-hydroxy-8-
 [(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-
 diyl)bis(1-oxo-3,1-propanediyl)]bis-, tetramethyl ester (9CI)
 MF C46 H53 N7 O12

Absolute stereochemistry.
 Double bond geometry unknown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? {1}.end

=>Testing the current file.... screen

ENTER SCREEN EXPRESSION OR (END):end

=> screen 966 AND 1006

L7 SCREEN CREATED

=> screen 1821 OR 1822 OR 1823 OR 1824

L8 SCREEN CREATED

=>

Uploading C:\STNEXP4\QUERIES\889698.str

L9 STRUCTURE UPLOADED

=> que L9 AND L7 AND L8

L10 QUE L9 AND L7 AND L8

=> d

L10 HAS NO ANSWERS

L7 SCR 966 AND 1006

L8 SCR 1821 OR 1822 OR 1823 OR 1824

L9 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L10 QUE ABB=ON PLU=ON L9 AND L7 AND L8

=> s l10

SAMPLE SEARCH INITIATED 14:01:13 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 5 TO ITERATE

100.0% PROCESSED 5 ITERATIONS

2 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 5 TO 234

PROJECTED ANSWERS: 2 TO 124

L11 2 SEA SSS SAM L9 AND L7 AND L8

=> s l10 full

FULL SEARCH INITIATED 14:01:19 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 108 TO ITERATE

100.0% PROCESSED 108 ITERATIONS

63 ANSWERS

SEARCH TIME: 00.00.01

L12 63 SEA SSS FUL L9 AND L7 AND L8

=> d scan

L12 63 ANSWERS REGISTRY COPYRIGHT 2003 ACS

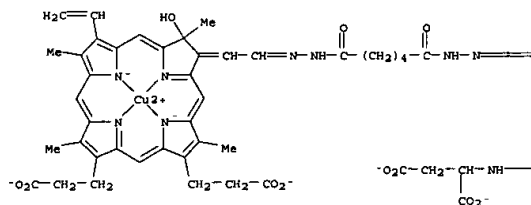
IN Cuprate(6-), [7-[[[6-[[[2,18-bis[3-[(1,2-dicarboxyethyl)amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazino]-1,6-dioxohexyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato(8-)-,kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]-,hexahydrogen-, (SP-4-2)-, (9CI)

MF C82 H80 Cu N14 O18 . 6 H

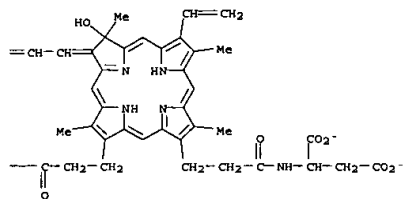
CI CCS

L12 63 ANSWERS REGISTRY COPYRIGHT 2003 ACS (Continued)

PAGE 1-A

● 6 H⁺

PAGE 1-B



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1) :end

=> fil .search
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
296.70	297.12

FULL ESTIMATED COST

FILE 'MEDLINE' ENTERED AT 14:01:41 ON 30 JAN 2003

FILE 'CAPLUS' ENTERED AT 14:01:41 ON 30 JAN 2003
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FILE 'BIOSIS' ENTERED AT 14:01:41 ON 30 JAN 2003
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FILE 'USPATFULL' ENTERED AT 14:01:41 ON 30 JAN 2003
CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'EMBASE' ENTERED AT 14:01:41 ON 30 JAN 2003
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=> d his

(FILE 'HOME' ENTERED AT 13:58:39 ON 30 JAN 2003)

FILE 'REGISTRY' ENTERED AT 13:59:46 ON 30 JAN 2003

L1	SCREEN 966 AND 1006
L2	SCREEN 1821 OR 1822 OR 1823 OR 1824
L3	STRUCTURE UPLOADED
L4	QUE L3 AND L1 AND L2
L5	1 S L4
L6	11 S L4 FULL
L7	SCREEN 966 AND 1006
L8	SCREEN 1821 OR 1822 OR 1823 OR 1824
L9	STRUCTURE UPLOADED
L10	QUE L9 AND L7 AND L8
L11	2 S L10
L12	63 S L10 FULL

FILE 'MEDLINE, CAPLUS, BIOSIS, USPATFULL, EMBASE' ENTERED AT 14:01:41 ON
30 JAN 2003

=> s l12 or l6

COMMAND INTERRUPTED

If this message appears repeatedly, please notify the Help Desk.
Enter "HELP STN" for information on contacting the nearest STN Help
Desk by telephone or via SEND in the STNMAIL file.

=> s l6 or l12

COMMAND INTERRUPTED

If this message appears repeatedly, please notify the Help Desk.
Enter "HELP STN" for information on contacting the nearest STN Help
Desk by telephone or via SEND in the STNMAIL file.

=> s l6 or l12

2 FILES SEARCHED...

L13 28 L6 OR L12

=> dup rem l13

PROCESSING COMPLETED FOR L13

L14 26 DUP REM L13 (2 DUPLICATES REMOVED)

=> d ibib abs hitstr 1-

YOU HAVE REQUESTED DATA FROM 26 ANSWERS - CONTINUE? Y/(N):y

L14 ANSWER 1 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
 ACCESSION NUMBER: 2003:54364 BIOSIS
 DOCUMENT NUMBER: PREV200300054364
 TITLE: Critical parameters in the cytotoxicity of photodynamic therapy using a pulsed laser.
 AUTHOR(S): Seguchi, K.; Kawachi, S.; Morimoto, Y. (1); Arai, T.; Asanuma, H.; Hayakawa, M.; Kikuchi, M.
 CORPORATE SOURCE: (1) Department of Medical Engineering, National Defense Medical College, 3-2 Namiki, Tokorozawa, Saitama, 359-8513, Japan: moyan@interlink.or.jp Japan
 SOURCE: Lasers in Medical Science, (2002) Vol. 17, No. 4, pp. 265-271. print.
 ISSN: 0268-8921.
 DOCUMENT TYPE: Article
 LANGUAGE: English
 AB Photodynamic therapy (PDT) using a pulsed laser is becoming popular, but its cytotoxic effect is still not clear. We therefore studied the cytotoxicity of PDT using a pulsed laser by changing its irradiation parameters and compared the degrees of cytotoxicity with those of PDT using continuous-wave (CW) light sources. Mice renal cell carcinoma cells were incubated with PAD-S31, a water-soluble photosensitizer of which the excitation peak is 670 nm, and were then irradiated with either a tungsten lamp, a CW diode laser, or a nanosecond pulsed Nd:YAG laser-based optical parametric oscillator system. When the PAD-S31 concentration and total light dose were constant (12 mg/ml and 40 J/cm², respectively), the CW laser caused fluence rate-dependent decrease in cellular proliferation until the fluence rate reached 90 mW/cm², at which point inhibition of cellular proliferation was more than 80%. The cytotoxicity then became almost saturated at fluence rates of >90 mW/cm². On the other hand, inhibition of cellular proliferation in samples irradiated with the pulsed laser reached 80% even at the fluence rate of 15 mW/cm², and, interestingly, the cytotoxicity paradoxically decreased with increase in the fluence rate. Moreover, the cytotoxicity in the PDT using the pulsed laser depended on the repetition rate. The inhibition of cellular proliferation by PDT using 30-Hz irradiation was greater than that by PDT using 5-Hz irradiation when the same fluence rates were used. These results suggest that the efficacy of PDT using a pulsed laser depends considerably on fluence rate and repetition rate.

L14 ANSWER 3 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
 ACCESSION NUMBER: 2002:40846 BIOSIS
 DOCUMENT NUMBER: PREV20020040846
 TITLE: Sonodynamic therapy reduced neointimal hyperplasia after stenting in rabbit iliac artery.
 AUTHOR(S): Arakawa, Koh (1); Hagisawa, Kousuke (1); Kusano, Hiroyuki (1); Yoneyama, Satoru (1); Kurita, Akira (1); Arai, Tamenori (1); Kikuchi, Makoto (1); Umemura, Shin-ichiro (1); Sakata, Isao (1); Ohsuzu, Fumitaka (1)
 CORPORATE SOURCE: (1) National Defense Medical College, Tokorozawa Japan
 SOURCE: Journal of the American College of Cardiology, (March 6, 2002) Vol. 39, No. 5 Supplement A, pp. 68A.
 http://www.cardiosource.com/config/jacc/default.htm.
 print.
 Meeting Info.: 51st Annual Scientific Session of the American College of Cardiology Atlanta, GA, USA March 17-20, 2002
 ISSN: 0735-1097.
 CONFERENCE: Conference
 DOCUMENT TYPE: Article
 LANGUAGE: English

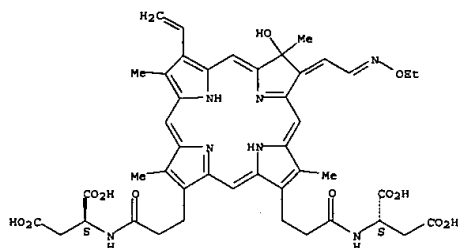
L14 ANSWER 2 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
 ACCESSION NUMBER: 2002:130618 BIOSIS
 DOCUMENT NUMBER: PREV200200130618
 TITLE: Sonodynamic therapy decreased neointimal hyperplasia after stenting in the rabbit iliac artery.
 AUTHOR(S): Arakawa, Koh (1); Hagisawa, Kousuke (1); Kusano, Hiroyuki (1); Yoneyama, Satoru (1); Kurita, Akira (1); Arai, Tamenori (1); Kikuchi, Makoto (1); Sakata, Isao (1); Umemura, Shin-ichiro (1); Ohsuzu, Fumitaka (1)
 CORPORATE SOURCE: (1) Department Medicine I, National Defense Medical College, 3-2, Namiki, Tokorozawa, Saitama, 359-8513: karakawa@me.ndmc.ac.jp Japan
 SOURCE: Circulation, (January 15, 2002) Vol. 105, No. 2, pp. 149-153. http://circ.ahajournals.org/. print.
 ISSN: 0009-7322.
 DOCUMENT TYPE: Article
 LANGUAGE: English
 AB Background-In-stent restenosis remains a pivotal problem after coronary and peripheral stenting. Sonodynamic therapy inhibits tumor growth by means of cytotoxicity after the activation of sonochemical sensitizers by ultrasound. PAD-S31 is known to be a water-soluble, chlorin-derivative sonochemical sensitizer. We assessed the efficacy of sonodynamic therapy using this sensitizer on neointimal hyperplasia in a rabbit stent model. Methods and Results-Stents were implanted in the iliac arteries of 16 rabbits. A total of 32 stented arteries were randomized to sonodynamic therapy, control, ultrasound exposure, and PAD-S31 groups. One hour after the intravenous administration of PAD-S31 (25 mg/kg body weight), ultrasound energy (1 MHz, 0.3 W/cm²) was delivered transdermally to the sonodynamic therapy group. At 28 days, all stent sites were analyzed morphometrically. The size of the intimal cross-sectional area was smaller in the sonodynamic therapy group than in the control, ultrasound, and PAD-S31 groups (0.31±0.07 versus 1.38±0.47, 1.66±0.71, and 1.61±0.42 mm², respectively; P<0.05). The ratio of the intimal and medial cross-sectional area was smaller in the sonodynamic therapy group than in the control, ultrasound, and PAD-S31 groups (0.71±0.22 versus 2.53±1.39, 2.48±0.60, and 3.45±1.42 mm²; P<0.05). Conclusions-Sonodynamic therapy with PAD-S31 is considered to be a feasible treatment modality for noninvasively inhibiting neointimal hyperplasia in a rabbit iliac stent model.

L14 ANSWER 4 OF 26 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 2001:416945 CAPLUS
 DOCUMENT NUMBER: 135:33409
 TITLE: Preparation of porphyrin compounds for photodynamic diagnosis and therapy.
 INVENTOR(S): Sakata, Isao; Nakajima, Susumu; Nakae, Yoshinori
 PATENT ASSIGNOR(S): Photochemical Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 23 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001040234	A1	20010607	WO 2000-JP8386	20001129
W: AU, CA, JP, KR, US				
RM: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1148058	A1	20011024	EP 2000-977993	20001129
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 2003017112	A1	20030123	US 2001-889698	20010720
PRIORITY APPLN. INFO.:			JP 1999-339330	A 19991130
			WO 2000-JP8386	W 20001129

AB Porphyrin compds. [e.g., 13,17-bis[(1,2-dicarboxyethyl)carbamoyl]ethyl]-3-ethenyl-7-hydroxy-8-ethoxyminoethylidene-2,7,12,18-tetramethylporphyrin], useful in photodynamic diagnosis and therapy of cancer in animals, are disclosed and biol. tested.
 IT 189619-79-2P 343627-42-9P 343627-43-0P 343627-46-3P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PRIP (Preparation); USES (Uses) (prepn. of porphyrin compds. for photodynamic diagnosis and therapy)
 RN 189619-79-2 CAPLUS
 CN L-Aspartic acid,
 N,N'-[[12-ethenyl-7-[(ethoxymino)ethylidene]-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)
 Absolute stereochemistry.
 Double bond geometry unknown.

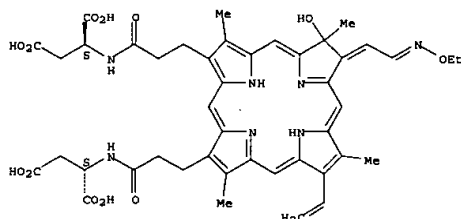
L14 ANSWER 4 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)



RN 343627-42-9 CAPLUS

CN L-Aspartic acid,

N,N'-[[13-ethenyl-8-[(ethoxyimino)ethylidene]-7,8-dihydro-7-hydroxy-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

RN 343627-43-0 CAPLUS

CN L-Aspartic acid,

N,N'-[[13-ethenyl-8-[(ethoxyimino)ethylidene]-7,8-dihydro-7-hydroxy-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

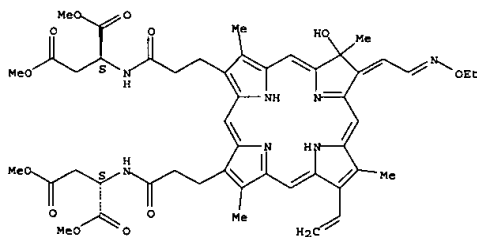
L14 ANSWER 4 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

IT 343627-39-4P 343627-40-7P 343627-41-8P
343627-44-1P 343627-45-2P 343627-47-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); REACT (Reactant or reagent)
(prepn. of porphyrin compds. for photodynamic diagnosis and therapy)

RN 343627-39-4 CAPLUS

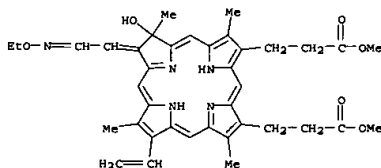
CN L-Aspartic acid,

N,N'-[[13-ethenyl-8-[(ethoxyimino)ethylidene]-7,8-dihydro-7-hydroxy-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetramethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

RN 343627-40-7 CAPLUS

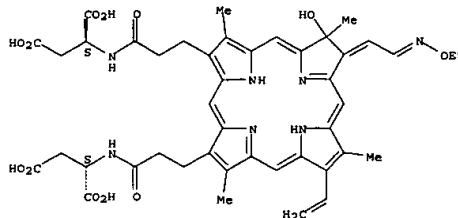
CN 21H,23H-Porphine-2,18-dipropanoic acid, 13-ethenyl-8-[(ethoxyimino)ethylidene]-7,8-dihydro-7-hydroxy-3,7,12,17-tetramethyl-, dimethyl ester (9CI) (CA INDEX NAME)



RN 343627-41-8 CAPLUS

CN 21H,23H-Porphine-2,18-dipropanoic acid, 13-ethenyl-8-[(ethoxyimino)ethylidene]-7,8-dihydro-7-hydroxy-3,7,12,17-tetramethyl-, (9CI) (CA INDEX NAME)

L14 ANSWER 4 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

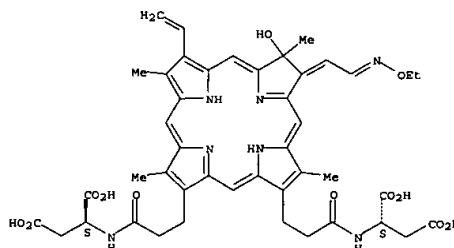


● 4 Na

RN 343627-46-3 CAPLUS

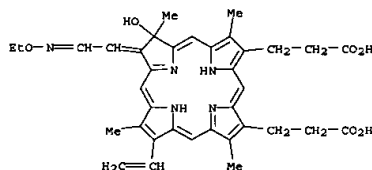
CN L-Aspartic acid,

N,N'-[[12-ethenyl-7-[(ethoxyimino)ethylidene]-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

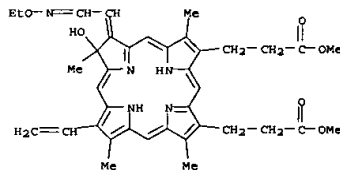
● 4 Na

L14 ANSWER 4 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)



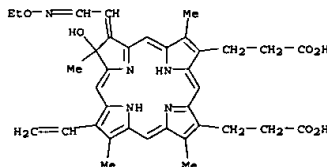
RN 343627-44-1 CAPLUS

CN 21H,23H-Porphine-2,18-dipropanoic acid, 12-ethenyl-7-[(ethoxyimino)ethylidene]-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-, dimethyl ester (9CI) (CA INDEX NAME)



RN 343627-45-2 CAPLUS

CN 21H,23H-Porphine-2,18-dipropanoic acid, 12-ethenyl-7-[(ethoxyimino)ethylidene]-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-, (9CI) (CA INDEX NAME)



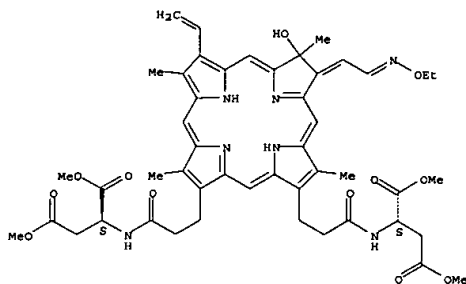
RN 343627-47-4 CAPLUS

CN L-Aspartic acid,

N,N'-[[12-ethenyl-7-[(ethoxyimino)ethylidene]-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetramethyl ester (9CI) (CA INDEX NAME)

L14 ANSWER 4 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

Absolute stereochemistry.
Double bond geometry unknown.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L14 ANSWER 6 OF 26 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:310725 CAPLUS
DOCUMENT NUMBER: 138:15335
TITLE: The advantage of porphyrin for BNCT from the point of view of cell cycle
AUTHOR(S): Shibata, Yasuaki; Matsumura, Akira; Yoshida, Fumiyo; Yamamoto, Tetsuya; Nakai, Kei; Nose, Tadao; Sakata, Isao; Nakajima, Susumu
CORPORATE SOURCE: Department of Neurosurgery, University of Tsukuba, Ibaraki, 305, Japan
SOURCE: Frontiers in Neutron Capture Therapy, [Proceedings of the International Symposium on Neutron Capture Therapy for Cancer], 8th, Los Angeles, CA, United States, Sept. 13-18, 1998 (2001), Meeting Date 1998, Volume 2, 1089-1092. Editor(s): Hawthorne, M. Frederick; Shelly, Kenneth; Wiersma, Richard J. Kluwer Academic/Plenum Publishers: New York, N. Y. CODEN: 69CMQV; ISBN: 0-306-46442-X
DOCUMENT TYPE: Conference
LANGUAGE: English

AB The tumor cell uptake of porphyrin in relation to cell cycle was studied using flow cytometry system in vitro glioma cell lines. Four established brain tumor cell lines were cultured in RPMI 1640 medium or Earle's MEM soln. at 37-degree. in an atm. of 5% CO2 in air. The 1 times. 105 cells of each cell lines was analyzed with flow cytometry. The study showed porphyrin uptake in all cells, regardless of the phase of the cell cycle. However, those in G0/G1 phase showed moderate uptake of porphyrin and those in the G2/M phase showed higher uptake. Borocaptate sodium (BSH) and boronophenylalanine (BPA) are two major boron compds. used in boron neutron capture therapy. The tumor control effect of BNCT using BPA was better than that using BSH. Cancer therapy requires cytotoxic or cytotoxic effects not only on proliferating G2/M cells but also on G0/G1 cells which may enter the active cell cycle. The targets of BNCT using porphyrin compds. are cells at rest and cells undergoing cell division. On BNCT using porphyrin compds. a more lethal effect is expected for cells in the G2/M phase.
IT 189357-37-7, ATX-S10-Na
RL: BSU (Biological study, unclassified); BIOL (Biological study) (brain tumor uptake of porphyrin deriv. in relation to cell cycle)
RN 189357-37-7 CAPLUS
CN L-Aspartic acid, N,N'-[13-ethenyl-7,8-dihydro-7-hydroxy-8-[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX NAME)

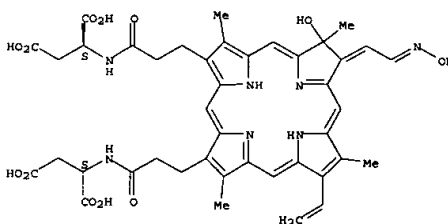
Absolute stereochemistry.
Double bond geometry unknown.

L14 ANSWER 5 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

ACCESSION NUMBER: 2001:523178 BIOSIS
DOCUMENT NUMBER: PREV200100523178
TITLE: PDT to monkey CNV with ATX-S10(Na): Inappropriateness of early laser irradiation for selective occlusion.
AUTHOR(S): Ohana, Akira (1); Gohto, Yuko; Kaneda, Kenji; Nakajima, Susumu; Miki, Tokuhiko
CORPORATE SOURCE: (1) Department of Ophthalmology and Visual Sciences, Osaka City University Graduate School of Medicine, 1-4-3 Asahimachi Abeno-ku, Osaka City, 545-8585; akira-kunmed.osaka-cu.ac.jp Japan
SOURCE: IOVS, (October, 2001) Vol. 42, No. 11, pp. 2639-2645. print.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB PURPOSE: There is controversy about which mode of laser irradiation, early

irradiation with low-dose photosensitizer or late irradiation with high-dose, benefits the selective occlusion of choroidal neovascularization (CNV) in photodynamic therapy (PDT). In this study, using an amphiphilic photosensitizer, 13,17-bis (1-carboxypropionyl) carbamoyl-ethyl-8-ethenyl-2-hydroxy-3-hydroxyiminoethylidene-2,7,12,18-tetraethyl porphyrin sodium (ATX-S10(Na); Photochemical Inc., Okayama, Japan), photodynamic and adverse effects of early irradiation on CNV-bearing monkey eyes were investigated. METHODS: Experimentally induced CNV lesions and normal retina were irradiated with a diode laser (670-nm wavelength) at a dose of 1 to 90 J/cm2 at 1 to 19 minutes after intravenous injection of 2 mg/kg body weight of ATX-S10(Na). Vascular occlusion and CNV recurrence were evaluated by fluorescein and indocyanine green angiography and histologic analysis, until 4 weeks after irradiation. RESULTS: Of 45 different conditions, 23 did not induce CNV closure, 20 provided both CNV occlusion and retinal vessel damage, and 2 achieved selective CNV occlusion without retinal vascular injury. Recurrence of CNV was induced in 19 of 22 CNV-occluding conditions. ATX-S10(Na) angiography showed that dyes were similarly distributed between normal vessels and CNV at early time periods after injection, whereas they were preferentially accumulated in CNV after 30 minutes. CONCLUSIONS: In PDT with ATX-S10(Na), irradiation within 20 minutes of dye injection failed to induce selective CNV occlusion, probably because there is no significant difference in the biodistribution of dye between CNV and retinal vessels. It also caused frequent CNV recurrence after extensive inflammation in the irradiated retina.

L14 ANSWER 6 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)



● 4 Na

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

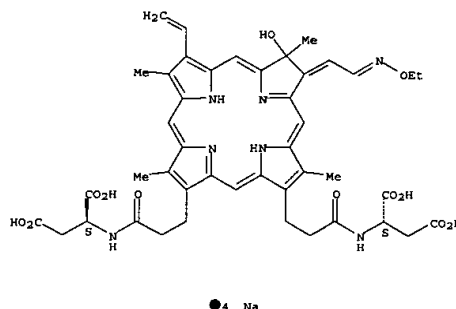
FORMAT

L14 ANSWER 7 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
 ACCESSION NUMBER: 2001:276863 BIOSIS
 DOCUMENT NUMBER: PREV200100276863
 TITLE: In vitro photodynamic effects of ATX-S10(Na) and mode of cell death on vascular endothelial cells.
 AUTHOR(S): Gohto, Y. (1); Obana, A. (1); Huang, Y. (1); Nakajima, S.
 CORPORATE SOURCE: (1) Department of Ophthalmology, Osaka City University Medical School, Osaka Japan
 SOURCE: IOVS, (March 15, 2001) Vol. 42, No. 4, pp. S437. print.
 Meeting Info.: Annual Meeting of the Association for Research in Vision and Ophthalmology Fort Lauderdale, Florida, USA April 29-May 04, 2001
 DOCUMENT TYPE: Conference
 LANGUAGE: English
 SUMMARY LANGUAGE: English

L14 ANSWER 8 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
 ACCESSION NUMBER: 2001:288222 BIOSIS
 DOCUMENT NUMBER: PREV200100288222
 TITLE: Subcellular localization of three different photosensitizers in vascular endothelial cells.
 AUTHOR(S): Obana, A. (1); Gohto, Y. (1); Nakajima, S.
 CORPORATE SOURCE: (1) Department of Ophthalmology, Osaka City University Medical School, Osaka Japan
 SOURCE: IOVS, (March 15, 2001) Vol. 42, No. 4, pp. S436. print.
 Meeting Info.: Annual Meeting of the Association for Research in Vision and Ophthalmology Fort Lauderdale, Florida, USA April 29-May 04, 2001
 DOCUMENT TYPE: Conference
 LANGUAGE: English
 SUMMARY LANGUAGE: English

L14 ANSWER 9 OF 26 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 2001:449518 CAPLUS
 DOCUMENT NUMBER: 136:66285
 TITLE: Influence of light intensity and repetition rate of nanosecond laser pulses on photodynamic therapy with PAD-S31 in mouse renal carcinoma cell line in vitro: study for oxygen consumption and photobleaching
 AUTHOR(S): Kawauchi, Satoko; Arai, Tsunenori; Seguchi, Kenji; Ayanuma, Hiroshi; Sato, Shunichi; Kikuchi, Makoto; Takemura, Takeshi; Sakata, Issa; Nakajima, Susumu
 CORPORATE SOURCE: Dept. of Medical Engineering, National Defense College, Japan
 SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (2001), 4248(Optical Methods for Tumor Treatment and Detection: Mechanisms and Techniques in Photodynamic Therapy X), 138-143
 CODEN: PSISDG; ISSN: 0277-786X
 PUBLISHER: SPIE-The International Society for Optical Engineering
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB In order to det. the optimum light irradsn. condition to treat deep lesions, we studied influence of light intensity and repetition rate of nanosecond light pulses on photodynamic therapy (PDT) with PAD-S31 (13,17-bis-1-carboxypropionyl-carbamoyl-ethyl-3-ethenyl-8-ethoxyminoethylidene-7-hydroxy-2,7,12,18-tetramethyl porphyrin sodium) to mouse renal carcinoma cell line (Renca) in vitro. The oxygen consumption and photobleaching were measured to explain this influence. We used the short light pulses (λ : 670 nm, FWHM: 5 ns) at the peak intensity of 0.6, 1.8 and 3.6 MW/cm², repetition rate of 30 and 5 Hz, and used the total fluence of 40 J/cm². We obtained over 80% cell growth inhibition rate of 0.6 MW/cm² and 5 Hz. This irradsn. condition was the lowest peak intensity and lowest repetition rate in our study.
 IT 343627-46-3, PAD-S 31
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (photosensitizer; laser intensity and repetition rate effect on PAD-S31 PDT renal carcinoma: oxygen consumption and photobleaching study)
 RN 343627-46-3 CAPLUS
 CN L-Aspartic acid.
 N,N'-[[12-ethenyl-7-[[ethoxymino]ethylidene]-7,8-dihydro-6-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX NAME)
 Absolute stereochemistry.
 Double bond geometry unknown.

L14 ANSWER 9 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RECORD.

L14 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1

ACCESSION NUMBER: 2000:908379 CAPLUS

DOCUMENT NUMBER: 134:218974

TITLE: Treatment parameters for selective occlusion of

experimental corneal neovascularization by
photodynamic therapy using a water soluble
photosensitizer, ATX-S10(Na)

AUTHOR(S): Gohto, Yuko; Obana, Akira; Kanai, Masakazu; Nagata, Satoshi; Nakajima, Susumu; Miki, Tokuhiko

CORPORATE SOURCE: Department of Ophthalmology, Osaka City University

SOURCE: Medical School, Osaka, Japan

Experimental Eye Research (2001), 72(1), 13-22

CODEN: EXERA6; ISSN: 0014-4835

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Time-dependent change of an accumulation of an amphiphilic
photosensitizer, ATX-S10(Na) on rabbit corneal neovascularization (CoNV)
was evaluated by angiog. using ATX-S10(Na) as a fluorescent dye on three
rabbits. The angiog. showed that the dye accumulated on CoNV 3-5 h after
dye injection when the dye in the iris was min. The results suggested

3-5 h after might be the optimal time to start photodynamic therapy (PDT) to
occlude CoNV selectively without damage to the surrounding normal tissue
such as the iris. Then the optimal treatment parameters in PDT using
ATX-S10(Na) for selective occlusion of the CoNV were investigated on
rabbit eyes. PDT was performed with two different time intervals between
dye injection and laser irradiation of a diode laser (670 nm), different

laser doses and three different dye doses on 21 animals. PDT performed
immediately after dye injection selectively occluded CoNV with laser
irradiations from 30.6 to 38.2 J cm⁻² and a 2 mg kg⁻¹ dose of ATX-S10(Na),
as well as with 15.3 J cm⁻² and a 6 mg kg⁻¹ dose. PDT performed 4 h after
dye injection with 107.0-152.8 J cm⁻² and a 6 mg kg⁻¹ dose, as well as with
38.2-53.5 J cm⁻² and a 12 mg kg⁻¹ dose was also effective. Although PDT
performed either immediately or 4 h after ATX-S10(Na) injection
selectively occluded CoNV, the width of the optimal range of radiant
exposures seemed wider in PDT performed 4 h after dye injection. It is
supposed that this result is associated with the difference of dye
accumulation between in CoNV and in normal tissue as shown by the present
angiog. findings. (c) 2001 Academic Press.

IT 189357-37-7, ATX-S10(Na)

RL: BAC (Biological activity or effector, except adverse); BPR

(Biological process); BSU (Biological study, unclassified); THU (Therapeutic use);
BIOL (Biological study); PROC (Process); USSS (Uses)
(selective occlusion of corneal neovascularization by photodynamic
therapy with water sol. photosensitizer ATX-S10(Na))

RN 189357-37-7 CAPLUS

CN L-Aspartic acid, N,N'-[[13-ethenyl-7,8-dihydro-7-hydroxy-8-
[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-
diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX
NAME)

Absolute stereochemistry.

Double bond geometry unknown.

L14 ANSWER 11 OF 26 USPATFULL

ACCESSION NUMBER: 2000:61593 USPATFULL

TITLE: Iminochlorinspartic acid derivatives

INVENTOR(S): Hikida, Muneco, Saitama, Japan

Mori, Masahiko, Saitama, Japan

Sekata, Isao, Okayama, Japan

Nakajima, Susumu, Hokkaido, Japan

Takata, Hiroyuki, Okayama, Japan

Wyeth Lederle Japan, Ltd., Japan (non-U.S.

corporation)
Photochemical Co., Ltd., Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6063777		20000516
	WO 9814753		19980409
APPLICATION INFO.:	US 1999-269557		19990615 (9)
	WO 1997-JP3484		19970930
		19990615	PCT 371 date
		19990615	PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1996-278611	19961001
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Raymond, Richard L.	
ASSISTANT EXAMINER:	Sripada, Pavanaram K	
LEGAL REPRESENTATIVE:	Evenson, McKeown, Edwards & Lenahan, P.L.L.C.	
NUMBER OF CLAIMS:	9	
EXEMPLARY CLAIMS:	1	
NUMBER OF DRAWINGS:	1 Drawing Figure(s); 1 Drawing Page(s)	
LINE COUNT:	671	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides an iminochlorin aspartic acid derivative
represented by the following formula (I): ##STR1## wherein Asp
represents an aspartic acid residue, or a pharmaceutically acceptable
salt thereof. The compound of the present invention is useful as a
photosensitizer for photophysics-chemical diagnosis and therapy of
cancer, because it has a high accumulability to cancerous cells,
reactivity to external energy and a cancerous cell destroying effect
which is effective even against cancers developing in deep site, while
it is rapidly excreted from normal cells and therefore causes no damage
thereto.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 189357-36-6P 189357-37-7P 205760-27-6P

205760-28-7P 205760-29-8P 205760-30-1P

(prepn. of iminochlorinaspartic acid derive.)

RN 189357-36-6 USPATFULL

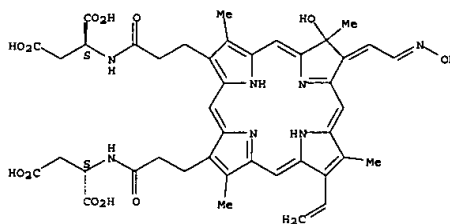
CN L-Aspartic acid, N,N'-[[13-ethenyl-7,8-dihydro-8-hydroxy-7-
[(hydroxyimino)ethylidene]-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-
diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX
NAME)

Absolute stereochemistry.

Double bond geometry unknown.

L14 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1

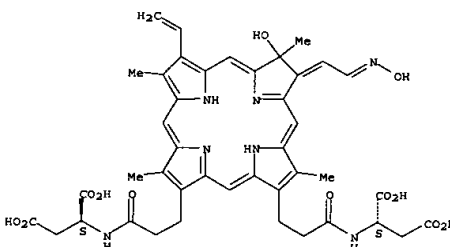
(Continued)



● 4 Na

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L14 ANSWER 11 OF 26 USPATFULL (Continued)



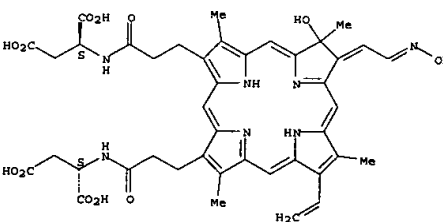
● 4 Na

RN 189357-37-7 USPATFULL

CN L-Aspartic acid, N,N'-[[13-ethenyl-7,8-dihydro-7-hydroxy-8-
[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-
diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX
NAME)

Absolute stereochemistry.

Double bond geometry unknown.



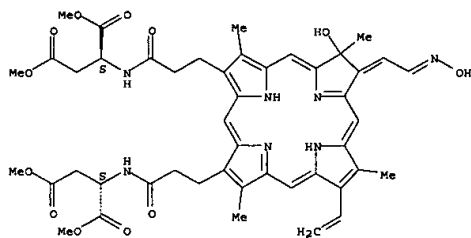
● 4 Na

RN 205760-27-6 USPATFULL

CN L-Aspartic acid, N,N'-[[13-ethenyl-7,8-dihydro-7-hydroxy-8-
[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-
diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetramethyl ester (9CI) (CA
INDEX

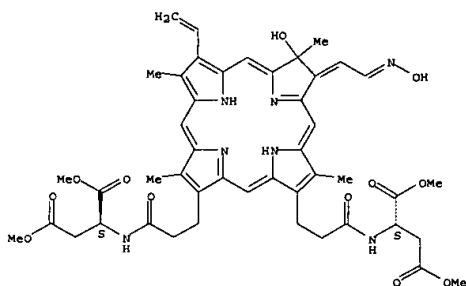
L14 ANSWER 11 OF 26 USPATFULL (Continued)
NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 205760-28-7 USPATFULL
CN L-Aspartic acid, N,N'-[[12-ethenyl-7,8-dihydro-8-hydroxy-7-[(hydroxyimino)ethylidene]-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetramethyl ester (9CI) (CA INDEX NAME)

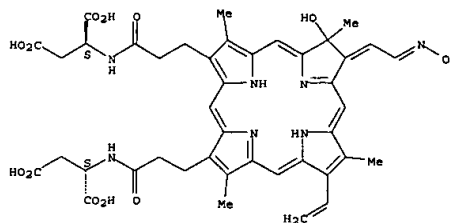
Absolute stereochemistry.
Double bond geometry unknown.



L14 ANSWER 11 OF 26 USPATFULL (Continued)

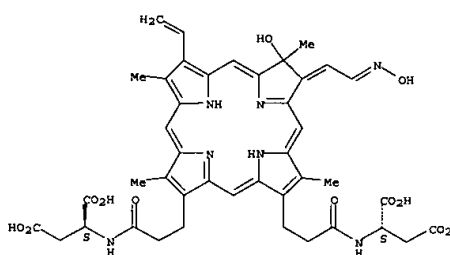
RN 205760-29-8 USPATFULL
CN L-Aspartic acid, N,N'-[[13-ethenyl-7,8-dihydro-7-hydroxy-8-[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 205760-30-1 USPATFULL
CN L-Aspartic acid, N,N'-[[12-ethenyl-7,8-dihydro-8-hydroxy-7-[(hydroxyimino)ethylidene]-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

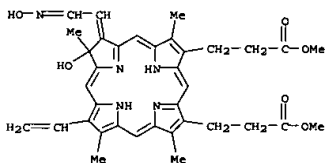
Absolute stereochemistry.
Double bond geometry unknown.



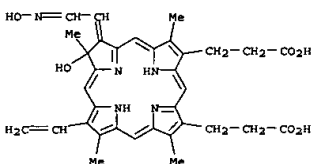
IT 28383-51-9P 150582-63-1P 157828-58-5P
205760-26-5P

L14 ANSWER 11 OF 26 USPATFULL (Continued)
(prepn. of iminochlorinaspartic acid derive.)

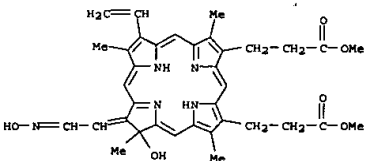
RN 28383-51-9 USPATFULL
CN 21H,23H-Porphine-2,18-dipropanoic acid,
12-ethenyl-7,8-dihydro-8-hydroxy-7-
[2-(hydroxyimino)ethylidene]-3,8,13,17-tetramethyl-, dimethyl ester
(9CI) (CA INDEX NAME)



RN 150582-63-1 USPATFULL
CN 21H,23H-Porphine-2,18-dipropanoic acid,
12-ethenyl-7,8-dihydro-8-hydroxy-7-
[(hydroxyimino)ethylidene]-3,8,13,17-tetramethyl- (9CI) (CA INDEX NAME)

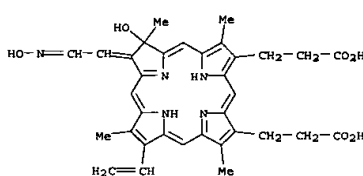


RN 157828-58-5 USPATFULL
CN 21H,23H-Porphine-2,18-dipropanoic acid,
13-ethenyl-7,8-dihydro-7-hydroxy-8-
[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-, dimethyl ester (9CI)
(CA INDEX NAME)



L14 ANSWER 11 OF 26 USPATFULL (Continued)

RN 205760-26-5 USPATFULL
CN 21H,23H-Porphine-2,18-dipropanoic acid,
13-ethenyl-7,8-dihydro-7-hydroxy-8-
[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl- (9CI) (CA INDEX NAME)



L14 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:627222 CAPLUS

DOCUMENT NUMBER: 133:292936

TITLE: In vitro plasma protein binding and cellular uptake of

AUTHOR(S): ATX-S10(Na), a hydrophilic chlorin photosensitizer
Mori, Masahiko; Kuroda, Toyoshi; Obana, Akira;
Sakata,CORPORATE SOURCE: Isao; Hirano, Toru; Nakajima, Susumu; Hikida, Muneko;
Kumagai, ToshioSOURCE: Medical Research Laboratories, Wyeth Lederle Japan,
Ltd., Shiki, 353-8511, JapanJAPANESE JOURNAL OF CANCER RESEARCH (2000), 91(8),
845-852

CODEN: JJCREF; ISSN: 0910-5050

PUBLISHER: Japanese Cancer Association

DOCUMENT TYPE: Journal

LANGUAGE: English

AB ATX-S10(Na), a hydrophilic chlorin photosensitizer having an absorption
max. at 670 nm, is a candidate second-generation photosensitizer for
photodynamic therapy (PDT) for cancer treatment. In this study, weexamd. plasma protein binding, cellular uptake and subcellular targets of
ATX-S10(Na) in vitro. Protein binding ratios of 50 .mu.g/mL ATX-S10(Na)
in rat, dog and human plasma were 73.0%, 87.2% and 97.7%, resp. Gel
filtration chromatog. revealed that 1 mg/mL ATX-S10(Na) bound mainly to
high-d. lipoprotein (HDL) and serum albumin at the protein concn. of0.4%, with binding ratios of 46% and 36%, resp. The free form of ATX-S10(Na)
was mostly incorporated into T.Tn cells, and its cellular uptake was
partially but significantly inhibited by endocytosis inhibitors such as
phenylarsine oxide, chloroquine, monensin and phenylglyoxal, and by
chilling the cells to 4.degree.C. However, ouabain, haloxaline, sodium
cyanide, probenecid and aspartic acid did not influence the uptake of
ATX-S10(Na), suggesting that cellular uptake of ATX-S10(Na) was not
related to sodium-potassium pump activity, sodium-dependent transporter
activity, mitochondrial oxidative respiration, org. anion transporter
activity or aspartic acid transporter activity. By fluorescence
microscopy, lysosomal localization of ATX-S10(Na) was obsd. in T.Tncells. However, electron microscopic observation revealed that many subcellular
organelles such as mitochondria, endoplasmic reticulum, ribosomes, Golgi
complex and plasma membrane were damaged by PDT using 25 .mu.g/mL
ATX-S10(Na) soon after laser irradiatn. at 50 J/cm2, and tumor necrosis was
rapidly induced. This result indicated that ATX-S10(Na) was widely
distributed within the cell.IT 189357-37-7, ATX S10(Na)
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
(plasma protein binding and cellular uptake of ATX-S10(Na))

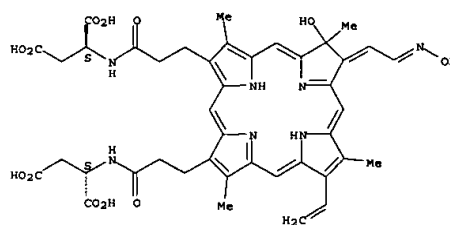
RN 189357-37-7 CAPLUS

CN L-Aspartic acid, N,N'-[(13-ethenyl-7,8-dihydro-7-hydroxy-8-
(hydroxyimino)ethylidene)-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-
diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX
NAME)

Absolute stereochemistry.

L14 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

Double bond geometry unknown.



● 4 Na

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR
THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L14 ANSWER 13 OF 26 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:618468 CAPLUS

DOCUMENT NUMBER: 133:263278

TITLE: Photodynamic therapy for experimental tumors using
ATX-S10(Na), a hydrophilic chlorin photosensitizer,
and diode laserAUTHOR(S): Mori, Masahiko; Sakata, Isao; Hirano, Toru; Obana,
Akira; Nakajima, Susumu; Hikida, Muneko; Kumagai,
ToshioCORPORATE SOURCE: Medical Research Laboratories, Wyeth Lederle Japan,
Ltd., Shiki, 353-8511, JapanSOURCE: JAPANESE JOURNAL OF CANCER RESEARCH (2000), 91(7),
751-759

CODEN: JJCREF; ISSN: 0910-5050

PUBLISHER: Japanese Cancer Association

DOCUMENT TYPE: Journal

LANGUAGE: English

AB ATX-S10(Na), a hydrophilic chlorin photosensitizer having an absorption
max. at 670 nm, is a candidate second-generation photosensitizer for use
in photodynamic therapy (PDT) for cancer treatment. The effectiveness of
PDT using ATX-S10(Na) and a diode laser for exptl. tumors was evaluatedin vitro and in vivo. In-vitro PDT using ATX-S10(Na) and the diode laser
showed drug concn., laser dose- and drug exposure time-dependent
cytotoxicity to various human and mouse tumor cell lines. In Meth-A
sarcoma implanted mice, optimal PDT conditions were found where tumors
were completely eliminated without any toxicity. Against human tumor
xenografts in nude mice, the combined use of 5 mg/kg ATX-S10(Na) and 200
J/cm2 laser irradiatn. 3 h after ATX-S10(Na) administration showed excellent
anti-tumor activity, and its efficacy was almost the same as that of PDT
using 20 mg/kg porfimer sodium and a 100 J/cm2 excimer dye laser 48 h
after porfimer sodium injection. Microscopic observation of tumortissues revealed that PDT using ATX-S10(Na) and the diode laser induced
congestion, thrombus and degeneration of endothelial cells in tumor
vessels, indicating that a vascular shutdown effect plays an important
role in the anti-tumor activity of PDT using ATX-S10(Na) and the diode
laser.

IT 189357-37-7, ATX-S10(Na)

RL: BAC (Biological activity or effector, except adverse); BSU
(Biological study); THU (Therapeutic use); BIOL (Biological study);

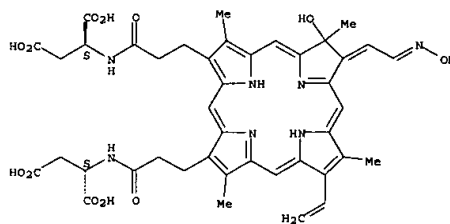
USES

(Uses)
(cancer photodynamic therapy using hydrophilic chlorin photosensitizer
ATX-S10 and diode laser)

RN 189357-37-7 CAPLUS

CN L-Aspartic acid, N,N'-[(13-ethenyl-7,8-dihydro-7-hydroxy-8-
(hydroxyimino)ethylidene)-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-
diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX
NAME)Absolute stereochemistry.
Double bond geometry unknown.

L14 ANSWER 13 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)



● 4 Na

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR
THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

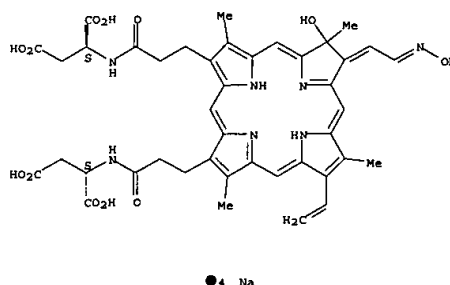
L14 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 2000:405400 CAPLUS
 DOCUMENT NUMBER: 133:263302
 TITLE: Selective photodynamic effects of the new photosensitizer ATX-S10 (Na) on choroidal neovascularization in monkey
 AUTHOR(S): Obana, Akira; Gohto, Yuko; Kanai, Masakazu; Nakajima, Susumu; Kaneda, Kenji; Miki, Tokuhiko
 CORPORATE SOURCE: Department of Ophthalmology, Osaka City University Medical School, Osaka, Japan
 SOURCE: Archives of Ophthalmology (Chicago) (2000), 118(5), 650-658
 CODEN: AROPAM; ISSN: 0003-9950
 PUBLISHER: American Medical Association
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Objective: To det. the optimal treatment variables for photodynamic therapy (PDT) with new photosensitizer ATX-S10 (Na) (13,17-bis[(1-carboxypropionyl) carbamoyl]ethyl-8-ethenyl-2-hydroxy-3-hydroxyiminoethylidene-2,7,12,18-tetramethyl 6 porphyrin sodium) to induce selective occlusion of choroidal neovascularization (CNV) in nonhuman primate eyes. Methods: Exptl. CNV was induced in monkey eyes by laser photocoagulation, and PDT was performed in neovascularized and healthy eyes with different treatment variables. At 0 to 150 min after 4-, 8-, and 12-mg/kg of body wt. i.v. injections of ATX-S10 (Na), a diode laser was irradiated at the dose of 1 to 127 J/cm² (wavelength, 670 nm). Vascular occlusion induced by PDT was evaluated using fluorescein angiogr., indocyanine green angiogr., and histol. examn. at 1 day to 4 wk after irradiation. Results: Selective occlusion of CNV without damage to healthy retinal and choroidal capillaries was achieved in the following conditions: 30 to 74 J/cm² irradiation at 30 to 74 min after the 8-mg/kg injection, and 1 to 29 J/cm² irradiation at 30 to 74 min or 30 to 74 J/cm² irradiation at 75 to 150 min after the 12-mg/kg dye injection. Regrowth of CNV often occurred when the retina was heavily injured by excessive PDT. Conclusion: By using optimal treatment variables, PDT using ATX-S10 (Na) induces selective occlusion of CNV in nonhuman primate eyes, providing the possibility of therapeutic application to the clin. practice. Clin. Relevance: Occlusion of CNV without direct damage to the sensory retina is useful to preserve visual acuity in patients with exudative age-related macular degeneration. A clin. trial of PDT using ATX-S10 (Na) is desirable.
 IT 189357-37-7, ATX-S10 (Na)
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study);
 USES (Uses)
 (photosensitizer ATX-S10 (Na) selective photodynamic effects on choroidal neovascularization: preserving visual acuity in age-related macular degeneration)
 RN 189357-37-7 CAPLUS
 CN L-Aspartic acid, N,N'-[[13-ethenyl-7,8-dihydro-7-hydroxy-8-[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis[(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX

L14 ANSWER 15 OF 26 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 2000:622124 CAPLUS
 DOCUMENT NUMBER: 134:292117
 TITLE: Accumulation of Photosensitizer ATX-S10 (Na) in Experimental Corneal Neovascularization
 AUTHOR(S): Gohto, Y.; Obana, A.; Kaneda, K.; Nakajima, S.; Takemura, T.; Miki, T.
 CORPORATE SOURCE: Departments of Ophthalmology, Osaka City University School of Medicine, Osaka, Japan
 SOURCE: Japanese Journal of Ophthalmology (2000), 44(4), 348-353
 CODEN: JJOPA7; ISSN: 0021-5155
 PUBLISHER: Elsevier Science Inc.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Purpose: To det. the most appropriate time for laser irradiation to produce selective occlusion of new corneal vessels by photodynamic therapy (PDT) with a new photosensitizer, ATX-S10 (Na). Methods: The time course of the plasma levels of ATX-S10 (Na) and the degree of dye accumulation in the corneal neovascularization after i.v. administration was detd. in rabbit eyes. Plasma concn. of ATX-S10 (Na) was analyzed by a spectrophotometer. The amt. of ATX-S10 (Na) in the new corneal vessels was measured by nitrogen-pulsed laser spectrofluorometry. Frozen sections of neovascularized cornea and iris were obsd. by fluorescence microscopy. Results: Plasma ATX-S10 (Na) concn. was highest 5 min after dye injection and rapidly decreased and reached almost zero at 24 h, indicating its prompt excretion from the body. The amt. of ATX-S10 (Na) in the new corneal vessels as measured by nitrogen-pulsed laser spectrofluorometry increased and reached maximal level at 2 to 4 h. Under fluorescence microscopy, the dye was more abundantly localized in the wall of new corneal vessels than in the normal tissue at 2 to 4 h. Conclusion: These results indicate that laser irradiation between 2 and 4 h after dye injection is appropriate for selective PDT with ATX-S10 (Na) for the occlusion of new corneal vessels.
 IT 189357-37-7, ATX-S10 (Na)
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (accumulation of photosensitizer ATX-S10 (Na) in corneal neovascularization)
 RN 189357-37-7 CAPLUS
 CN L-Aspartic acid, N,N'-[[13-ethenyl-7,8-dihydro-7-hydroxy-8-[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis[(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

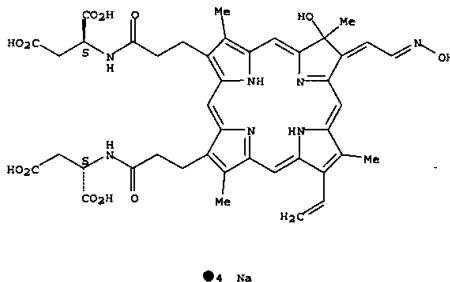
L14 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)
 NAME)

Absolute stereochemistry.
 Double bond geometry unknown.



REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
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L14 ANSWER 15 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

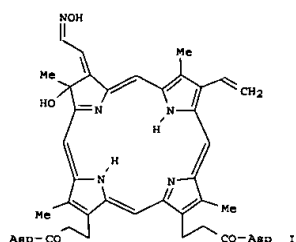


REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
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L14 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1998:219813 CAPLUS
 DOCUMENT NUMBER: 128:282741
 TITLE: Preparation of iminochlorinaspartic acid derivatives
 INVENTOR(S): Hikida, Munee; Mori, Masahiko; Sakata, Isao;
 Nakajima, Susumu; Takata, Hiroyuki
 PATENT ASSIGNEE(S): Lederle (Japan), Ltd., Japan; Toyo Hakke Kogyo Co.,
 Ltd.; Hikida, Munee; Mori, Masahiko; Sakata, Isao;
 Nakajima, Susumu; Takata, Hiroyuki
 SOURCE: PCT Int. Appl., 30 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9814453	A1	19980409	WO 1997-JP3484	19970930
W: AU, CA, JP, KR, US				
RM: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE AU 9743229	A1	19980424	AU 1997-43229	19970930
AU 713059	B2	19991125		
EP 945454	A1	19990929	EP 1997-941282	19970930
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
IE, FI				
KR 2000048843	A	20000725	KR 1999-702842	19990401
US 6063777	A	20000516	US 1999-269557	19990615
PRIORITY APPLN. INFO.:			JP 1996-278611	A 19961001
			WO 1997-JP3484	W 19970930

GI

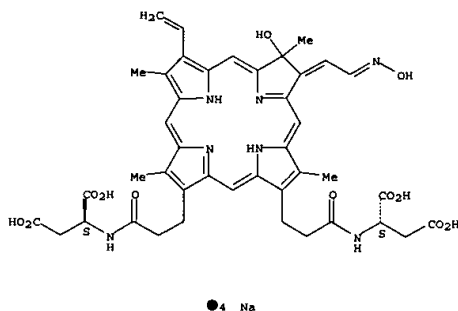


AB Iminochlorinaspartic acid deriva. I [Asp = aspartic acid residue] and their pharmacol. acceptable salts are prepd. These compds. are useful as

L14 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)
 photosensitizers in photophysics, diagnosis and therapy for cancer and have the advantages of accumulating selectively in cancer cells, being sensitive to external energy, showing a cytotoxic effect, and exerting a therapeutic effect even on a deep cancer while being quickly excreted from normal tissues without damaging the same. Thus, irradiation of protoporphyrin di-Me ester in CHCl₃ for 1 wk gave an A, B ring positional isomeric mixture of photoprotoporphyrin di-Me esters, which were separated by silica gel chromatography. These isomers were reacted with hydroxylamine hydrochloride to give the corresponding hydroxyimino derivatives, which were hydrolyzed to the corresponding carboxylic acids. These carboxylic acids were then reacted with aspartic acid di-Me ester to give the title compounds I (A, B ring positional isomers), which were hydrolyzed to the corresponding acids. In an in vitro study, the sodium salts of these acids at 6.25 μM showed 57 and 19% inhibition of Hela cells. The distribution of I in the body of mice was also studied.
 IT 189357-36-6P 189357-37-7P 205760-27-6P 205760-28-7P 205760-29-8P 205760-30-1P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (prepn. of iminochlorinaspartic acid derivs.)
 RN 189357-36-6 CAPLUS
 CN L-Aspartic acid, N,N'-[[12-ethenyl-7,8-dihydro-8-hydroxy-7-[(hydroxyimino)ethylidene]-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX NAME)

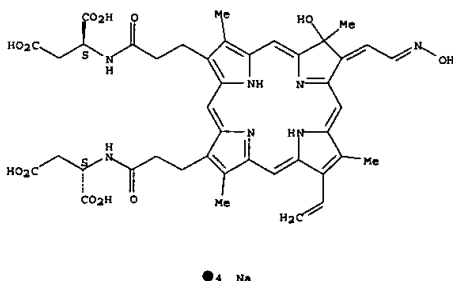
Absolute stereochemistry.
 Double bond geometry unknown.

L14 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)



RN 189357-37-7 CAPLUS
 CN L-Aspartic acid, N,N'-[[12-ethenyl-7,8-dihydro-7-hydroxy-8-[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX NAME)

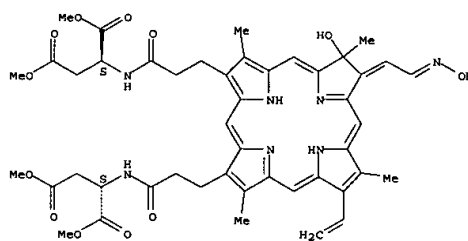
Absolute stereochemistry.
 Double bond geometry unknown.



RN 205760-27-6 CAPLUS
 CN L-Aspartic acid, N,N'-[[13-ethenyl-7,8-dihydro-7-hydroxy-8-[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetramethyl ester (9CI) (CA INDEX NAME)

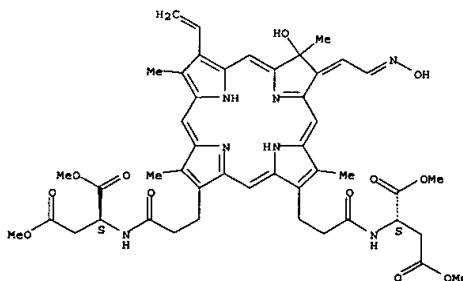
L14 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)
 NAME)

Absolute stereochemistry.
 Double bond geometry unknown.



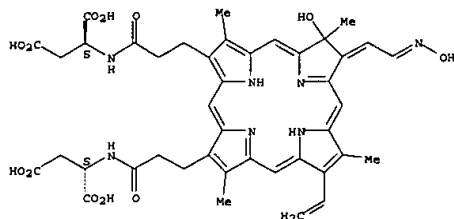
RN 205760-28-7 CAPLUS
 CN L-Aspartic acid, N,N'-[[12-ethenyl-7,8-dihydro-8-hydroxy-7-[(hydroxyimino)ethylidene]-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.



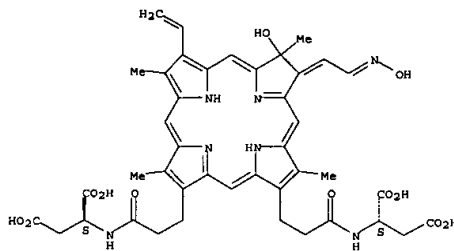
RN 205760-29-8 CAPLUS
 CN L-Aspartic acid, N,N'-[[13-ethenyl-7,8-dihydro-7-hydroxy-8-[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetramethyl ester (9CI) (CA INDEX NAME)

L14 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)
Absolute stereochemistry.
Double bond geometry unknown.



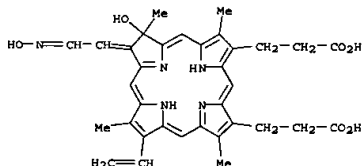
RN 205760-30-1 CAPLUS
CN L-Aspartic acid, N,N'-bis-[(12-ethenyl-7,8-dihydro-8-hydroxy-7-[(hydroxyimino)ethylidene]-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl)bis(1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

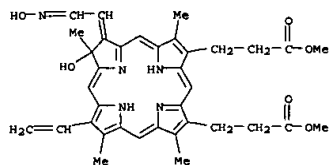


IT 28383-51-9P 150582-63-1P 157828-58-5P
205760-26-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of iminochlorinaspartic acid derivs.)
RN 28383-51-9 CAPLUS
CN 21H,23H-Porphine-2,18-dipropanoic acid,
12-ethenyl-7,8-dihydro-8-hydroxy-7-

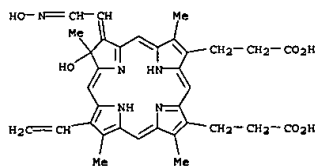
L14 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)
RN 205760-26-5 CAPLUS
CN 21H,23H-Porphine-2,18-dipropanoic acid,
13-ethenyl-7,8-dihydro-7-hydroxy-8-
[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl- (9CI) (CA INDEX NAME)



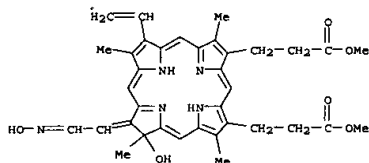
L14 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)
[2-(hydroxyimino)ethylidene]-3,8,13,17-tetramethyl-, dimethyl ester (9CI)
(CA INDEX NAME)



RN 150582-63-1 CAPLUS
CN 21H,23H-Porphine-2,18-dipropanoic acid,
12-ethenyl-7,8-dihydro-8-hydroxy-7-
[(hydroxyimino)ethylidene]-3,8,13,17-tetramethyl- (9CI) (CA INDEX NAME)



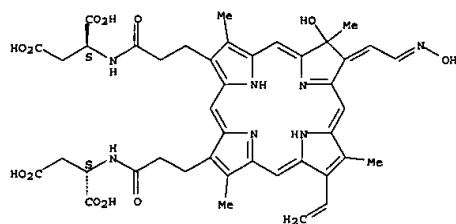
RN 157828-58-5 CAPLUS
CN 21H,23H-Porphine-2,18-dipropanoic acid,
13-ethenyl-7,8-dihydro-7-hydroxy-8-
[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-, dimethyl ester (9CI)
(CA INDEX NAME)



L14 ANSWER 17 OF 26 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:79776 CAPLUS
DOCUMENT NUMBER: 130:278671
TITLE: Accumulation of a photosensitizer ATX-S 10 Na (II) in experimental corneal neovascularization
AUTHOR(S): Gohto, Yuko; Obana, Akira; Kaneda, Kenji; Nakajima, Susumu; Takamura, Takeshi; Miki, Tokuhiko
CORPORATE SOURCE: Department of Ophthalmology, School of Medicine, Osaka City University, Japan
SOURCE: Nippon Ganka Gakkai Zasshi (1998), 102(11), 724-730
CODEN: NGZAA6; ISSN: 0029-0203
PUBLISHER: Nippon Ganka Gakkai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB In order to det. the most appropriate time point for laser irradiation in photodynamic therapy with a new photosensitizer, ATX-S 10 Na (II), which produces selective occlusion of new vessels, we investigated the time course of plasma levels of ATX-S 10 Na (II) after i.v. administration and degree of dye accumulation in the corneal neovascularization in rabbit eyes. Plasma ATX-S 10 Na (II) concn. decreased rapidly after injection and became virtually undetectable at 24 h, indicating rapid excretion from the body. Nitrogen-pulsed laser spectrofluorometry demonstrated that the amt. of ATX-S 10 Na (II) in new corneal vessels increased and reached a max. level 2 to 4 h after dye injection. ATX-S 10 Na (II) was localized in the wall of new corneal vessels and in extravascular tissue 2 to 4 h after dye injection. These results indicate that the appropriate time for laser irradiation in selective PDT is between 2 and 4 h after dye injection, when a larger amt. of dye is accumulated in neovascular tissue compared to normal tissue.
IT 189357-37-7, ATX-S 10 Na
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(accumulation of photosensitizer ATX-S 10 in corneal neovascularization)
RN 189357-37-7 CAPLUS
CN L-Aspartic acid, N,N'-bis-[(13-ethenyl-7,8-dihydro-7-hydroxy-8-[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-diyl)bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

L14 ANSWER 17 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)



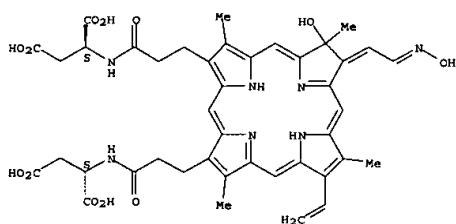
●4 Na

L14 ANSWER 18 OF 26 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:496728 CAPLUS
 DOCUMENT NUMBER: 129:227550
 TITLE: Therapeutic effect of interstitial photodynamic therapy using ATX-S10(Na) and a diode laser on radio-resistant SCCVII tumors of C3H/He mice
 AUTHOR(S): Nakajima, S.; Sakata, I.; Hirano, T.; Takemura, T.
 CORPORATE SOURCE: Division Surgical Operation, Asahikawa Medical College, Asahikawa, 078, Japan
 SOURCE: Anti-Cancer Drugs (1998), 9(6), 539-543
 CODEN: ANTDEV; ISSN: 0959-4973
 PUBLISHER: Lippincott-Raven Publishers
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB We examd. the effect of interstitial photodynamic therapy (PDT) with a new photosensitizer ATX-S10(Na). This photosensitizer showed the strongest therapeutic effect 2-4 h after administration and was rapidly excreted from individual organs except tumor and liver 24 h after i.v. injection. Microscopic histofluorescent imaging showed fluorescence of ATX-S10(Na) in the cytoplasm of the tumor cells, but not in nuclei and in the vascular wall. Irradn. of Liniac 30 Gly+20 Gly slightly reduced the tumor size, but all mice died of relapse within 60 days after irradiation. In the PDT group, all tumors became non-palpable and healing was achieved in 50% of mice 120 days after PDT.
 IT 189357-37-7, ATX-S 10(Na)
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (interstitial photodynamic therapy using ATX-S10(Na) and a diode laser of radioresistant tumors in mice)
 RN 189357-37-7 CAPLUS
 CN L-Aspartic acid, N,N'-[([13-ethenyl-7,8-dihydro-7-hydroxy-8-[(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

L14 ANSWER 18 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)



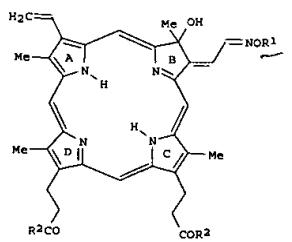
●4 Na

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L14 ANSWER 19 OF 26 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:443147 CAPLUS
 DOCUMENT NUMBER: 127:50475
 TITLE: Preparation of porphyrins as sensitizers in cancer photophysicochemical therapy
 INVENTOR(S): Sakata, Isao; Nakajima, Susumu; Koshimizu, Koichi; Takada, Hiroyuki; Inui, Yuji
 PATENT ASSIGNEE(S): Toyo Hakka Kogyo K. K., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JYKXAP
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09124652	A2	19970513	JP 1995-315710	19951030
PRIORITY APPLN. INFO.:		JP 1995-315710	19951030	
OTHER SOURCE(S): MARPAT 127:50475				
GI				

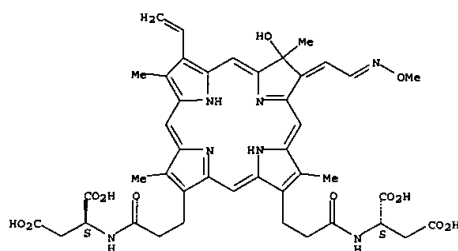


AB Title compds. I [R1 = Me, Et, iso-Bu, benzyl, CH2-C6F5; R2 = aspartic acid residue], including isomers contg. interchanged functionalized substituents in rings A and B, are prep'd. Thus, protoporphyrin di-Me ester in CHCl3 was irradiated according to R. K. Dinello's procedure (1978) to give 1-hydroxy-2-(formylmethylidene)protoporphyrin di-Me ester, which was hydrolysed in pyridine-methanol to give 42.7% dark green crystals of 1-hydroxy-2-(formylmethylidene)protoporphyrin. The dicyclohexylamine salt of this in CHCl3 was treated with di-Me aspartate hydrochloride in the presence of water-sol. carbodiimide for 5 h to give 17.3% photoporphyrinyl-6,7-bis(aspartic acid tetra-Me ester. This in pyridine was treated with O-methylhydroxylamine hydrochloride followed by hydrolysis to give 13.9% the title compd. I [R1 = Me, R2 = (S)-NHCH(COOH)CH2COOH] (II). II at 0.1 .mu.M sensitized the photooxidn. of dansylmethionine (10 .mu.M in CHCl3) in 4 min vs. <10 min for photofrin

L14 ANSWER 19 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

II.
 IT 189619-78-1DP, isomeric mixt. 189619-79-2DP, isomeric mixt. 189619-80-5DP, isomeric mixt. 189619-81-6DP, isomeric mixt. 189619-82-7DP, isomeric mixt.
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of porphyrins as sensitizers in cancer photophysicschem. therapy)
 RN 189619-78-1 CAPLUS
 CN L-Aspartic acid, N,N'-[[12-ethenyl-7,8-dihydro-8-hydroxy-7-[(methoxyimino)ethylidene]-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

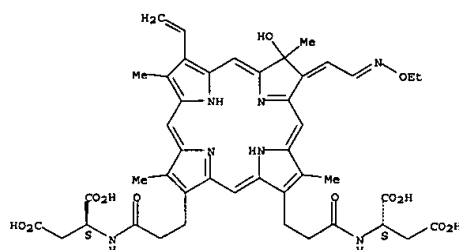
Absolute stereochemistry.
 Double bond geometry unknown.



RN 189619-79-2 CAPLUS
 CN L-Aspartic acid, N,N'-[[12-ethenyl-7-[(ethoxyimino)ethylidene]-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

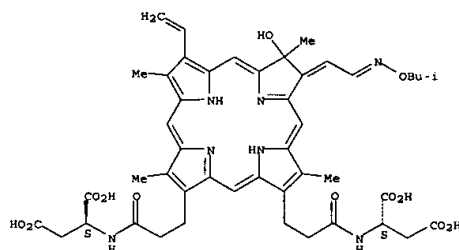
Absolute stereochemistry.
 Double bond geometry unknown.

L14 ANSWER 19 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)



RN 189619-80-5 CAPLUS
 CN L-Aspartic acid, N,N'-[[12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-7-[[2-methylpropoxy]imino]ethylidene]-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

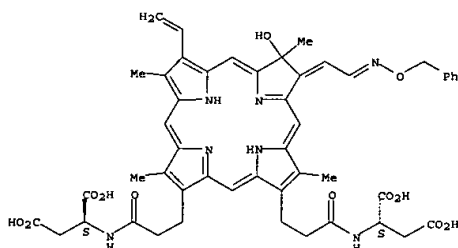
Absolute stereochemistry.
 Double bond geometry unknown.



RN 189619-81-6 CAPLUS
 CN L-Aspartic acid, N,N'-[[12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-7-[[phenylmethoxy]imino]ethylidene]-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

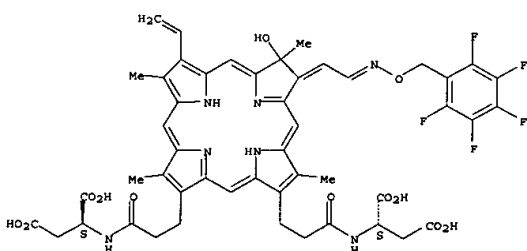
Absolute stereochemistry.
 Double bond geometry unknown.

L14 ANSWER 19 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)



RN 189619-82-7 CAPLUS
 CN L-Aspartic acid, N,N'-[[12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-7-[[[pentafuorophenyl]methoxy]imino]ethylidene]-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.



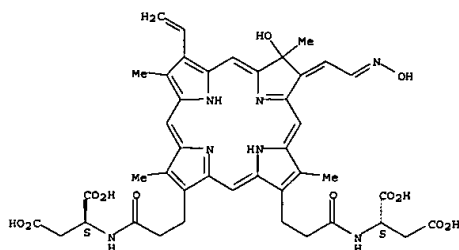
L14 ANSWER 20 OF 26 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:264747 CAPLUS
 DOCUMENT NUMBER: 126:311893
 TITLE: Antitumor effect of second generation photosensitizer ATX-S10 Na(II)
 AUTHOR(S): Nakajima, Susumu; Sakata, Isao; Takemura, Takeshi
 CORPORATE SOURCE: Asahikawa Med Coll., Asahikawa, 078, Japan
 SOURCE: Igaku no Ayumi (1997), 180(10), 689-690
 CODEN: IGAYAY; ISSN: 0039-2359
 PUBLISHER: Ishiyaku
 DOCUMENT TYPE: Journal
 LANGUAGE: Japanese
 AB A 2nd generation photosensitizer, 4-hydroxyimino-ethylidene-3-hydroxy-2-vinyl-deuteroporphyrinyl (IX)-6,7-diaspartic acid (ATX-S10) was divided into 2 regioisomers (I and II) with difference in binding site of NOH:R4 side ring in I and R2 side ring in II. ATX-S10-II exhibited 3 times higher concn. in colon 26 tumor in CDF1 mouse than ATX-S10-I. The concn. was not so different in normal tissues of liver lung and skeletal muscle. ATX-S10-II disappeared from serum by 12 h, and rapidly from other tissues. ATX-S10-II exhibited significantly stronger cytotoxic effects against HeLa cells in vitro below 50 .mu.M when argon-dye laser was irradiated at 25 J/cm2. Photodynamic therapy of SCCVII tumor in C3H/He mice exhibited more excellent therapeutic effect than linac irradiation for 30 Gy.
 IT 189357-36-6 189357-37-7
 RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (antitumor effect of second generation photosensitizer ATX-S10 Na(II))
 RN 189357-36-6 CAPLUS
 CN L-Aspartic acid, N,N'-[[12-ethenyl-7,8-dihydro-8-hydroxy-7-[(hydroxyimino)ethylidene]-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis-, tetrasodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

L14 ANSWER 20 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

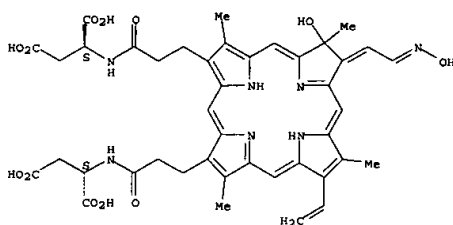
L14 ANSWER 20 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)



● 4 Na

RN 189357-37-7 CAPLUS
 CN L-Aspartic acid, N,N'-[[13-ethenyl-7,8-dihydro-7-hydroxy-8-
 [(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-
 diyl]bis[1-oxo-3,1-propanediyl]]bis-, tetrasodium salt (9CI) (CA INDEX
 NAME)

Absolute stereochemistry.
 Double bond geometry unknown.



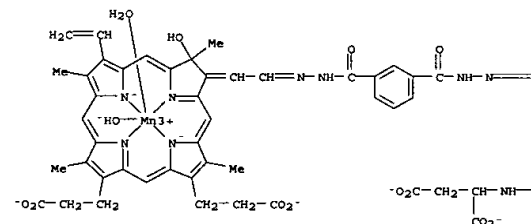
● 4 Na

L14 ANSWER 21 OF 26 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1995:583724 CAPLUS
 DOCUMENT NUMBER: 123:78619
 TITLE: Acoustic, fluorescent diagnosis of malignant lesions
 using by HAT-D01 and ATX-S10
 AUTHOR(S): Nakakjima, Susumu; Takemura, Takeshi; Sakata, Isao
 CORPORATE SOURCE: Division Surgical Operation, Asahikawa Medical
 College, Asahikawa, 078, Japan
 SOURCE: Proceedings of SPIE-The International Society for
 Optical Engineering (1995), 2371, 495-500
 CODEN: PSISDG; ISSN: 0277-786X
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB We have synthesized approx. 700 kinds of porphyrin deriva., studied their
 side chain structures and affinities for tumor tissues. On the basis of
 these studies, a tumor localizing photo-chlorine photosensitizer named
 ATX-S10 has been synthesized for PDT and fluorescent diagnosis of
 malignant lesions. The nonphotosensitive fluorescent diagnostic agent
 HAT-D01 has been also synthesized. Both deriva. have their fluorescence
 near 680 nm which is far from the autofluorescence of biol. tissue. For
 detection of tumor tissue, we have developed a new device that can pick
 up
 670-680 nm fluorescence selectively and convert the intensity of
 fluorescence to sound. By using this simple new device after ATX-S10 and
 HAT-D01 administration, we could detect malignant lesions.
 IT 155146-90-0, HAT-D01
 RL: BAC (Biological activity or effector, except adverse); BSU
 (Biological
 study, unclassified); THU (Therapeutic use); BIOL (Biological study);
 USES
 (Uses)
 (acoustic/fluorescent diagnosis of malignant lesions using by HAT-D01
 and ATX-S10)

RN 155146-90-0 CAPLUS
 CN Manganate(6-), aqua[(8S)-7-[[[3-[[[(8S)-2,18-bis[3-[[[(1S)-1,2-
 dicarboxyethyl]amino]-3-oxopropyl]-12-ethenyl]-8-hydroxy-3,8,13,17-
 tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazino]carbonyl]be
 nzo[1]hydrazono]ethylidene]-12-ethenyl]-7,8-dihydro-8-hydroxy-3,8,13,17-
 tetramethyl-21H,23H-porphine-2,18-dipropanoate(8-)-
 .kappa.N21, .kappa.N22, .kappa.N23, .kappa.N24]hydroxy-, stereoisomer (9CI)
 (CA INDEX NAME)

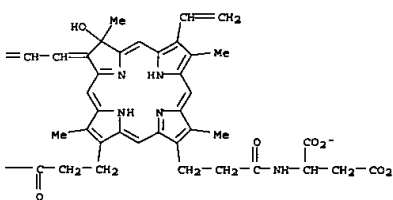
L14 ANSWER 21 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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● 6 H+

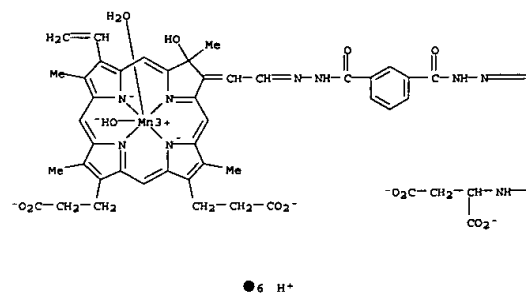
PAGE 1-B



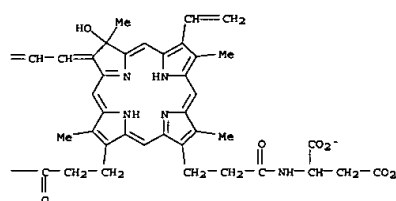
L14 ANSWER 22 OF 26 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1995:583699 CAPLUS
 DOCUMENT NUMBER: 123:78601
 TITLE: Tumor-localizing fluorescent diagnostic agents
 without
 AUTHOR(S): phototoxicity - HAT-D01
 Takemura, Takeshi; Umeuchi, Shiro; Nakajima, Susumu;
 Sakata, Isao
 CORPORATE SOURCE: Research Institute Electronic Science, Hokkaido
 University, Sapporo, 060, Japan
 SOURCE: Proceedings of SPIE-The International Society for
 Optical Engineering (1995), 2371, 154-8
 CODEN: PSISDG; ISSN: 0277-786X
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB To develop tumor-localizing fluorescent diagnostic agents without
 phototoxicity, various heterodimers linked by some spacers between a
 chlorine deriv. and its Mn or Cu complex were synthesized. The
 representative agent of them was named HAT-D01 and has a mol. formula of
 m-phthalyl-[[13,17-bispropanoic acid-3-ethenyl-8-formylethylidene-7-
 hydroxy-2,7,12,18-tetramethyl-porphyrinate]-manganese (III)]-[3'-ethenyl-
 8'-formylethylidene-7'-hydroxy-2',7',12',18'-tetramethyl-porphine-13',17'-
 biapropanoyl aspartic acid]-bis-hydrazine.
 IT 155146-90-0P, HAT-D01
 RL: BAC (Biological activity or effector, except adverse); BSU
 (Biological
 study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
 BIOL (Biological study); PREP (Preparation); USES (Uses)
 (tumor-localizing fluorescent diagnostic agent without phototoxicity -
 HAT-D01)
 RN 155146-90-0 CAPLUS
 CN Manganate(6-), aqua((8S)-7-[[[3-[[[(8S)-2,18-bis[3-[[[(1S)-1,2-
 dicarboxyethyl]amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-
 tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazino]carbonyl]be
 nzo]hydrazone]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-
 tetramethyl-21H,23H-porphine-2,18-dipropanoato(8-)-
 .Kappa.N21,.Kappa.N22,.Kappa.N23,.Kappa.N24]hydroxy-, stereoisomer (9CI)
 (CA INDEX NAME)

L14 ANSWER 22 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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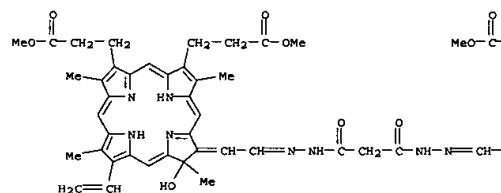
PAGE 1-B



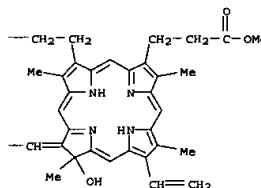
L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1994:55331 CAPLUS
 DOCUMENT NUMBER: 121:152331
 TITLE: Porphyrin dimers and their uses as sensitizers for
 photodynamic diagnosis and therapy or as contrast
 agents for NMR
 INVENTOR(S): Sakata, Isao; Nakajima, Susumu; Koshimizu, Koichi;
 Takada, Hiroyuki; Inui, Yasushi
 PATENT ASSIGNEE(S): Toyo Hakka Kogyo KK, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
 CODEN: JKKXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:
 PATENT NO. KIND DATE APPLICATION NO. DATE
 JP 06080671 A2 19940322 JP 1992-276488 19920903
 PRIORITY APPLN. INFO.: JP 1992-276488 19920903
 GI

L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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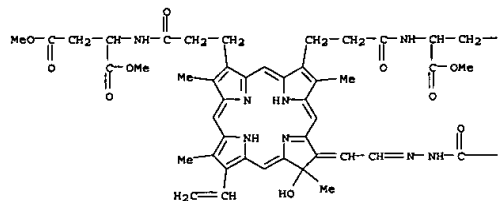
RN 157204-72-3 CAPLUS
 CN Hexanedioic acid, bis[[[12-ethenyl-8-hydroxy-2,18-bis[3-[[3-methoxy-1-
 (methoxycarbonyl)-3-oxopropyl]amino]-3-oxopropyl]-3,8,13,17-tetramethyl-
 21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazide] (9CI) (CA INDEX
 NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

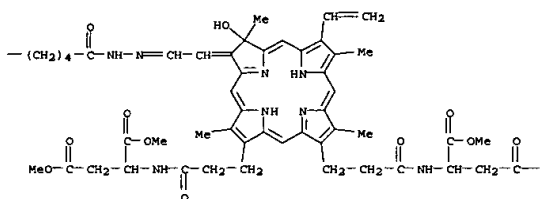
AB X:NNHCOACONHN:Y (I) [A = (CH2)n, phenylene; n = 0-8; X, Y = residue of
 Q1,
 Q2, or Q3 from which O of ketone or aldehyde is removed; Z = binding site
 of Q1, Q2, or Q3 with I; R1, R2 = OH, amino acid residue; R3 = H, CO2Me;
 M
 = 2H, Mn, Cu, Zn; the functional groups of ring A in Q1, Q2, or Q3 may be
 substituted with those of ring B] are useful as sensitizers for
 photodynamic diagnosis and therapy and as contrast agents for NMR. The
 porphyrin dimers accumulate in cancer cells and are esp. useful for
 therapy and diagnosis of cancer. Photoprotoporphyrin di-Me ester was
 treated with malonic acid dihydrazide at room temp. for 24 h to give 4.6%
 malonic acid-bis(photoprotoporphyrin)hydrazide tetra-Me ester (II) and
 20.3% malonic acid-mono(photoprotoporphyrin di-Me ester)hydrazide. II
 was
 hydrolyzed with 10% NaOH in pyridine to give 85.0% malonic
 acid-bis(photoprotoporphyrin)hydrazide, which showed higher phototoxicizing
 activity than Photofrin II.
 IT 157204-71-2P 157204-72-3P 157204-73-4P
 157204-74-5P 157259-88-6P 157409-61-5P
 157409-62-6P 157409-63-7P 157409-64-8P
 157440-89-6P 157440-90-9P 157440-91-0P
 157440-92-1P 157440-93-2P 157440-94-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (prepn. and hydrolysis of)
 RN 157204-71-2 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropanoic acid, 7,7'-[[1,3-dioxo-1,3-
 propanediyl]bis(2-hydrazinyl-1-ylidene-1,2-ethanediyldene)]bis[12-ethenyl-
 7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-, tetramethyl ester (9CI)
 (CA
 INDEX NAME)

L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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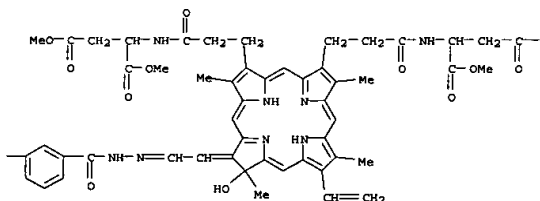


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L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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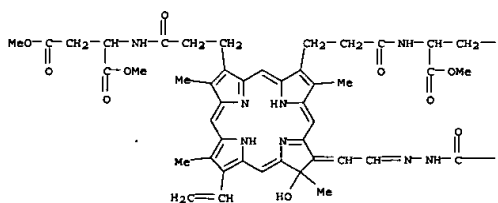
PAGE 1-C

—OMe

RN 157204-74-5 CAPLUS
 CN 1,4-Benzenedicarboxylic acid, bis[[[12-ethenyl-8-hydroxy-2,18-bis[[3-[[3-methoxy-1-(methoxycarbonyl)-3-oxopropyl]amino]-3-oxopropyl]-3,8,13,17-tetramethyl-21H,23H-porphin-7(BH)-ylidene]ethylidene]hydrazide] (9CI)

(CA
 INDEX NAME)

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L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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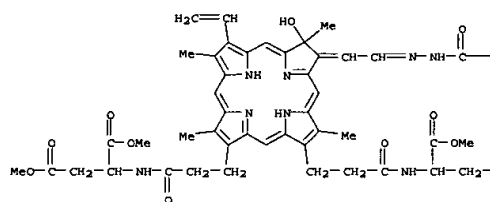


—OMe

RN 157204-73-4 CAPLUS
 CN 1,3-Benzenedicarboxylic acid, bis[[[12-ethenyl-8-hydroxy-2,18-bis[[3-[[3-methoxy-1-(methoxycarbonyl)-3-oxopropyl]amino]-3-oxopropyl]-3,8,13,17-tetramethyl-21H,23H-porphin-7(BH)-ylidene]ethylidene]hydrazide] (9CI)

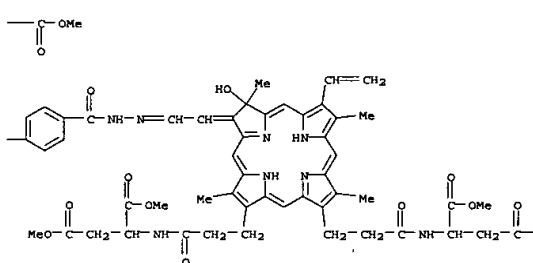
(CA
 INDEX NAME)

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L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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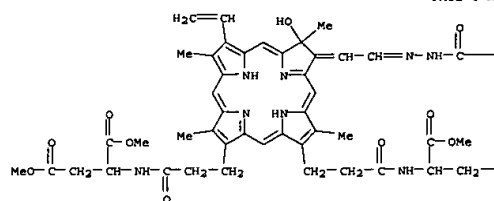
PAGE 1-C



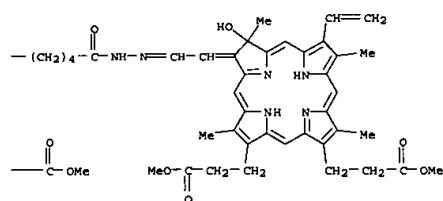
RN 157259-88-6 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropionic acid,
 12-ethenyl-7-[[[6-[[[12-ethenyl-8-hydroxy-2,18-bis[[3-[[3-methoxy-1-(methoxycarbonyl)-3-oxopropyl]amino]-3-oxopropyl]-3,8,13,17-tetramethyl-21H,23H-porphin-7(BH)-ylidene]ethylidene]hydrazino]-1,6-dioxohexyl]hydrazono]ethylidene]-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-, dimethyl ester (9CI) (CA INDEX NAME)

L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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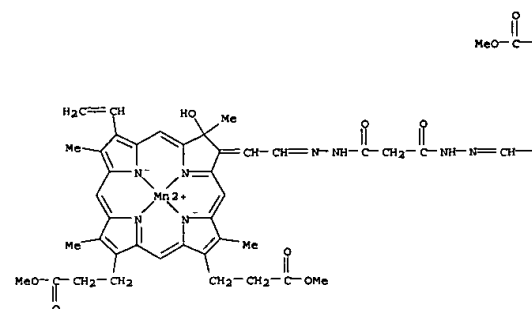
PAGE 1-B



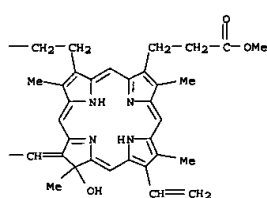
RN 157409-61-5 CAPLUS
 CN Manganese, [[tetramethyl
 7,7'-[[1,3-dioxo-1,3-propanediyl]bis(2-hydrazinyl-
 1-ylidene-1,2-ethanediylidene)]bis[12-ethenyl-7,8-dihydro-8-hydroxy-
 3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato]](2-)-
 N21,N22,N23,N24]-, (SP-4-2)- (9CI) (CA INDEX NAME)

L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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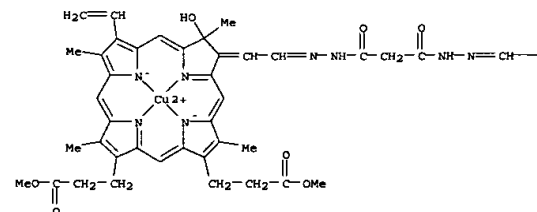
RN 157409-62-6 CAPLUS
 CN Copper, [[tetramethyl
 7,7'-[[1,3-dioxo-1,3-propanediyl]bis(2-hydrazinyl-1-
 ylidene-1,2-ethanediylidene)]bis[12-ethenyl-7,8-dihydro-8-hydroxy-
 3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato]](2-)-
 N21,N22,N23,N24]-, (SP-4-2)- (9CI) (CA INDEX NAME)

L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

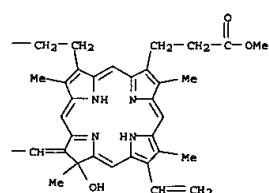
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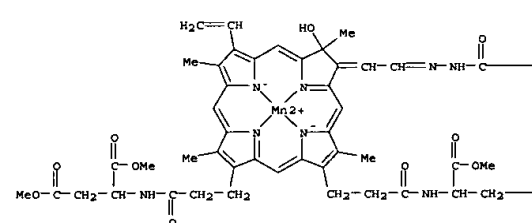
PAGE 1-B



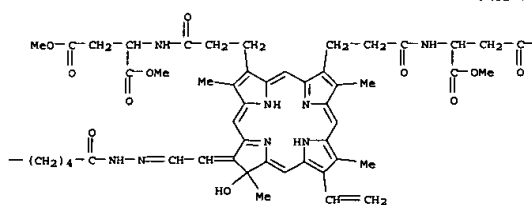
RN 157409-63-7 CAPLUS
 CN Manganese, [[hexanedioic acid bis[[[12-ethenyl-8-hydroxy-2,18-bis[3-[[3-
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 tetramethyl-21H,23H-porphin-7(8H)-ylidene-.kappa.N21,.kappa.N22,.kappa.N23
 .,kappa.N24]ethylenedihydrazidato]](2-)]-, (SP-4-2)- (9CI) (CA INDEX
 NAME)

L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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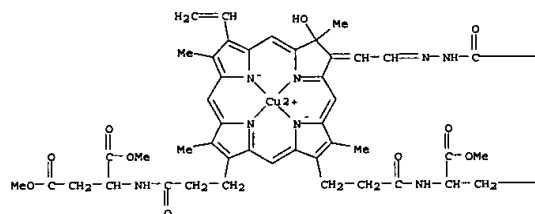


L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

RN 157409-64-8 CAPLUS

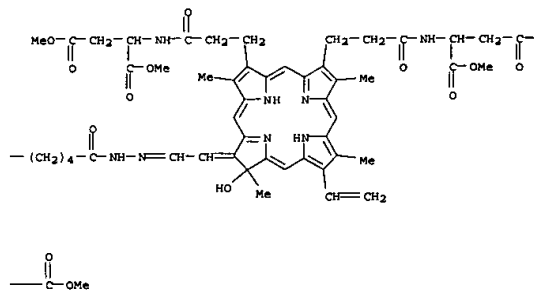
CN Copper, [[hexanedioic acid bis[[[12-ethenyl-8-hydroxy-2,18-bis(3-[[3-methoxy-2-(methoxycarbonyl)-3-oxopropyl]amino]-3-oxopropyl]-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]-kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]ethylidene]hydrazidato]](2-)-], (SP-4-2)- (9CI) (CA INDEX NAME)

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RN 157440-89-6 CAPLUS

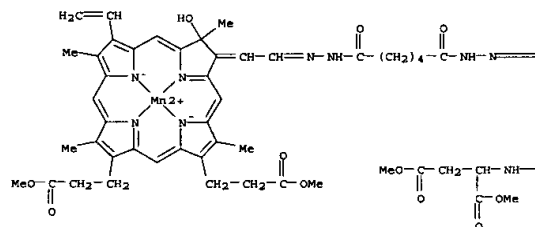
CN Manganese, (dimethyl

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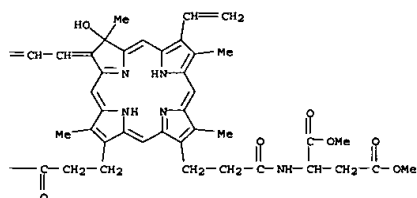
[[3-methoxy-1-(methoxycarbonyl)-3-oxopropyl]amino]-3-oxopropyl]-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazino]-1,3-dioxohexyl]hydrazono]ethylidene]-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropionate(2-)-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]-, (SP-4-2)- (9CI) (CA INDEX NAME)

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RN 157440-90-9 CAPLUS

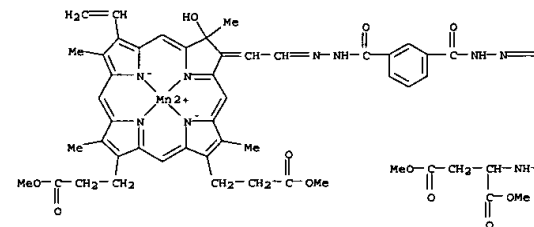
CN Manganese, (dimethyl

12-ethenyl-7-[[[3-[[[12-ethenyl-8-hydroxy-2,18-bis(3-

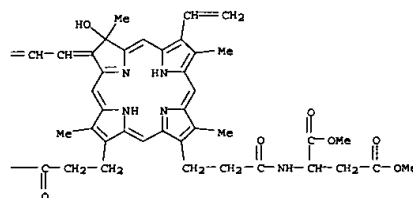
[[3-methoxy-1-(methoxycarbonyl)-3-oxopropyl]amino]-3-oxopropyl]-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazino]-1,3-dioxopropyl]hydrazono]ethylidene]-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropionate(2-)-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]-, (SP-4-2)- (9CI) (CA INDEX NAME)

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RN 157440-91-0 CAPLUS

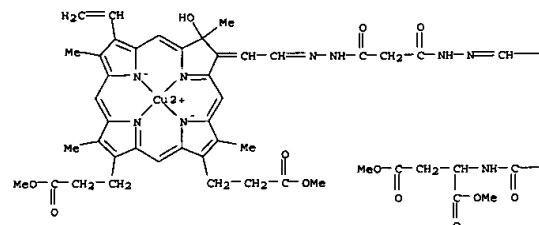
CN Copper, (dimethyl

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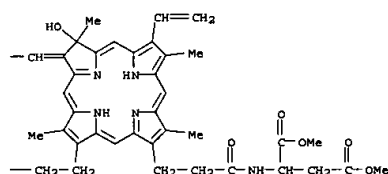
methoxy-1-(methoxycarbonyl)-3-oxopropyl]amino]-3-oxopropyl]-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazino]-1,3-dioxopropyl]hydrazono]ethylidene]-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropionate(2-)-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]-, (SP-4-2)- (9CI) (CA INDEX NAME)

L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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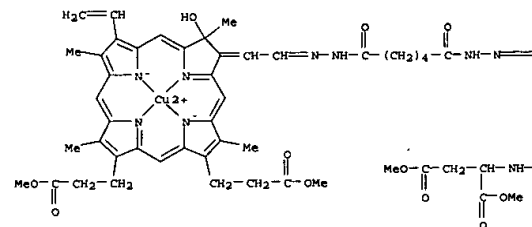
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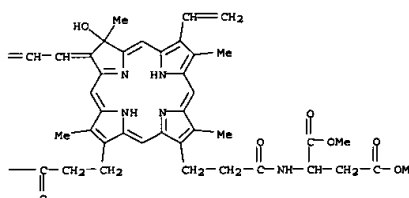
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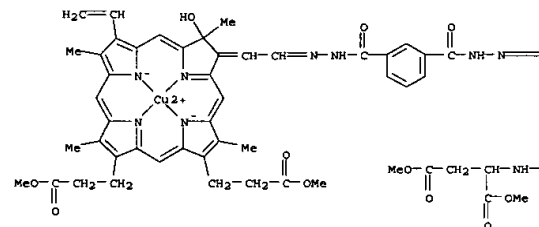
PAGE 1-B



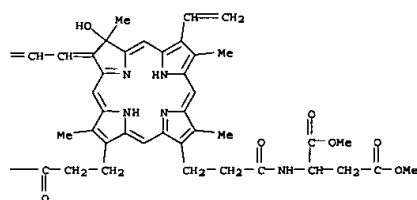
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L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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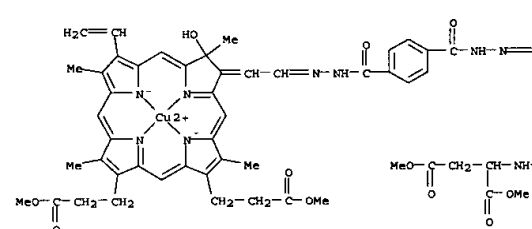
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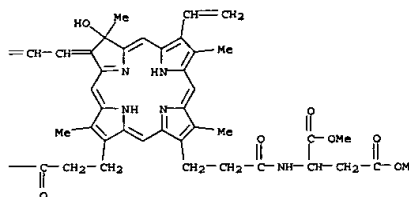
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 CN Copper, [dimethyl 12-ethenyl-7-[[[6-[[[12-ethenyl-8-hydroxy-2,18-bis[3-[[3-methoxy-1-(methoxycarbonyl)-3-oxopropyl]amino]-3-oxopropyl]-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazino]carbonyl]benzoyl]hydrazono]ethylidene]-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropionate(2-)-, kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]-, (SP-4-2)- (9CI) (CA INDEX NAME)]

L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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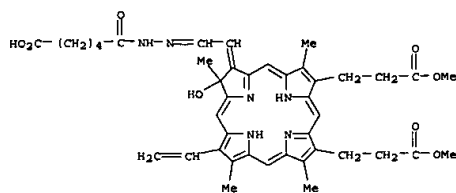


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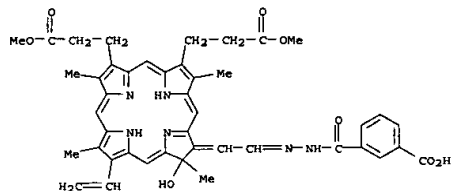


IT 157204-78-9P 157204-79-0P 157204-80-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and reaction of, with photoporphyrin deriv.)
 RN 157204-78-9 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropionic acid, 7-[[[5-carboxy-1-oxopentyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-, .alpha.,.alpha.-dimethyl ester (9CI) (CA INDEX NAME)]

L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

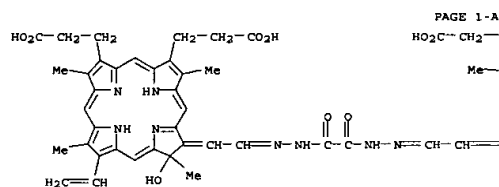


RN 157204-79-0 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropionic acid, 7-[[[3-carboxybenzoyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-, .alpha.,.alpha.'-dimethyl ester (9CI) (CA INDEX NAME)



RN 157204-80-3 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropionic acid, 7-[[[4-carboxybenzoyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-, .alpha.,.alpha.'-dimethyl ester (9CI) (CA INDEX NAME)

L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

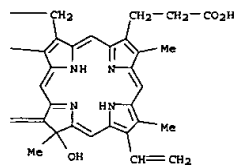


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HO2C-CH2-CH2-

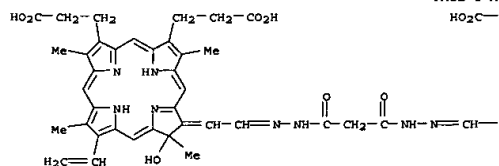
Me-

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RN 157204-66-5 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropionic acid, 7,7'-[[1,3-dioxo-1,3-propanediyl]bis(2-hydrazinyl-1-ylidene-1,2-ethanediylidene)]bis[12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-] (9CI) (CA INDEX NAME)

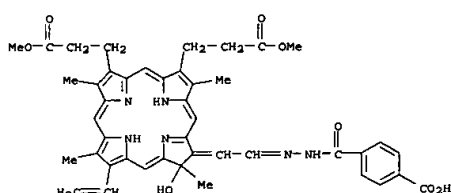
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HO2C-

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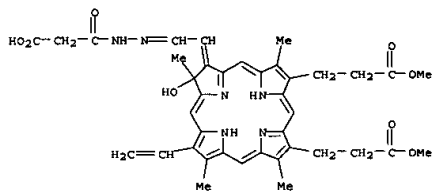


IT 157204-77-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and reaction of, with photoporphyrin di-Me ester)

RN 157204-77-8 CAPLUS

CN 21H,23H-Porphine-2,18-dipropionic acid, 7-[[[carboxyacetyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-, .alpha.,.alpha.'-dimethyl ester (9CI) (CA INDEX NAME)



IT 157204-65-4P 157204-66-5P 157204-67-6P

157204-68-7P 157232-03-6P 157232-06-9P

157409-55-7P 157409-56-8P 157440-80-7P

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157440-84-1P 157440-85-2P 157440-86-3P

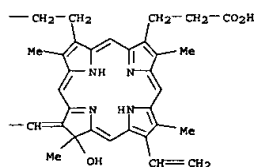
157440-87-4P 157440-88-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, as photosensitizer and contrast agent, for cancer diagnosis and therapy)

RN 157204-65-4 CAPLUS

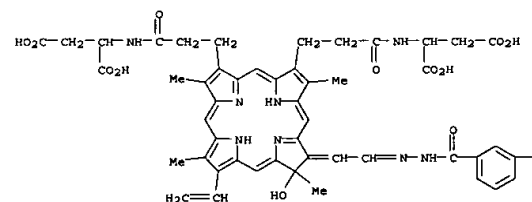
CN 21H,23H-Porphine-2,18-dipropionic acid, 7,7'-[[1,3-dioxo-1,3-propanediyl]bis(2-hydrazinyl-1-ylidene-1,2-ethanediylidene)]bis[12-ethenyl-

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RN 157204-67-6 CAPLUS
 CN 1,3-Benzenedicarboxylic acid, bis[[[2,18-bis[[3-[[1,2-dicarboxyethyl]amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazide] (9CI) (CA INDEX NAME)

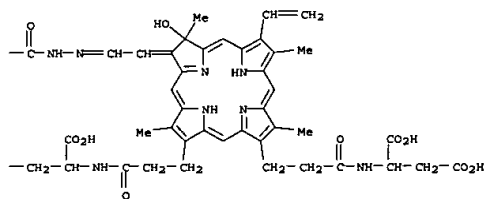
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HO2C-

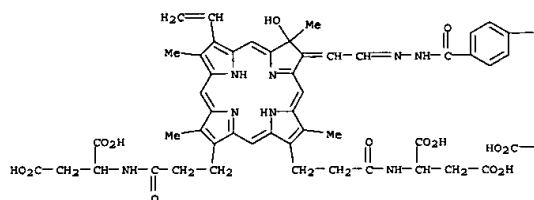
L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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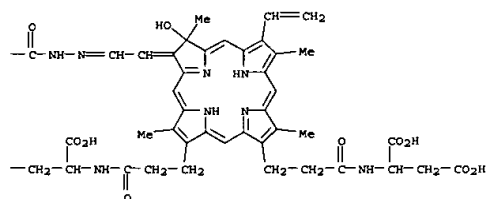
RN 157204-68-7 CAPLUS
 CN 1,4-Benzenedicarboxylic acid,
 bis[[(2,18-bis[3-[(1,2-dicarboxylethyl)amino]-
 3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-
 7(8H)-ylidene)ethylidene]hydrazide] (9CI) (CA INDEX NAME)

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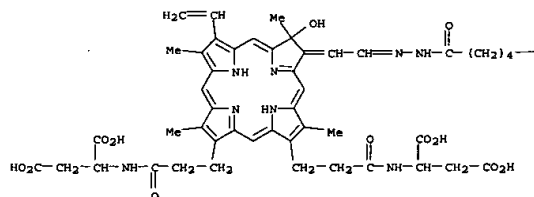
L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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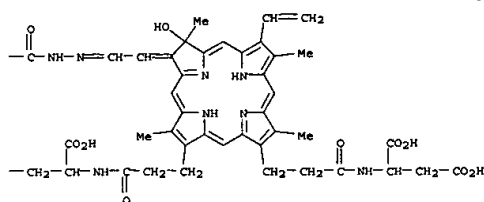
RN 157232-06-9 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropionic acid, 7-[[[6-[[[2,18-bis[3-[(1,2-dicarboxylethyl)amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene)ethylidene]hydrazino]-1,6-dioxohexyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl- (9CI) (CA INDEX NAME)

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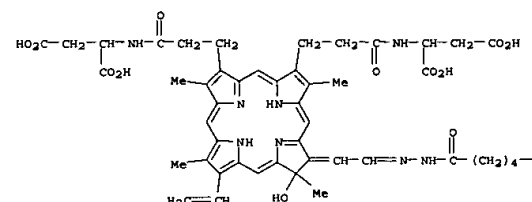
L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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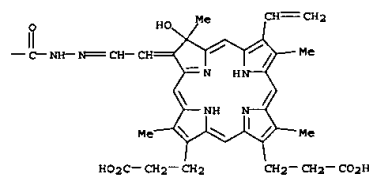
RN 157232-03-6 CAPLUS
 CN Hexanedioic acid, bis[[(2,18-bis[3-[(1,2-dicarboxylethyl)amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene)ethylidene]hydrazide] (9CI) (CA INDEX NAME)

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HO₂C—

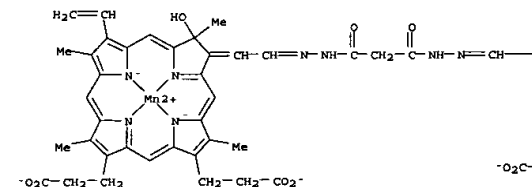
L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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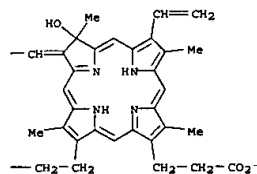
RN 157409-55-7 CAPLUS
 CN Manganate(4-), [7-[[[3-[[[2,18-bis[3-[(1,2-dicarboxylethyl)amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene)ethylidene]hydrazino]-1,3-dioxopropyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropionate(6-)-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]-, tetrahydrogen, (SP-4-2) (9CI) (CA INDEX NAME)

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● 4 H⁺

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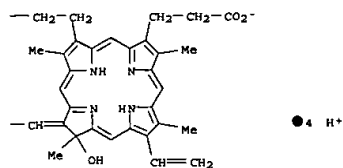


RN 157409-56-8 CAPLUS
 CN Cuprate(4-),
 [[7,7'-[[1,3-dioxo-1,3-propanediyl]bis(2-hydrazinyl-1-ylidene-1,2-ethanediylidene)]bis[12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropionate]] (6-)-N21,N22,N23,N24]-, tetrahydrogen, (SP-4-2)- (9CI) (CA INDEX NAME)

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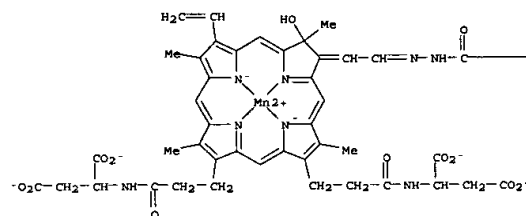
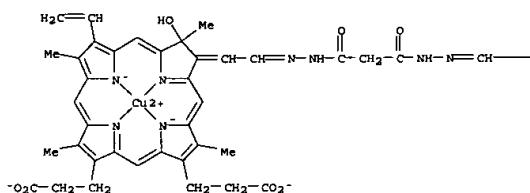
-O₂C-

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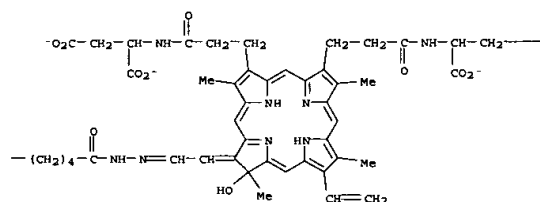
RN 157440-80-7 CAPLUS
 CN Manganate(8-), [[hexanedioic acid
 [[2,18-bis[3-[[1,2-dicarboxyethyl]amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]ethylidene]hydrazidato
 [[2,18-bis[3-[[1,2-dicarboxyethyl]amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazidato](10-)]-, octahydrogen, (SP-4-2)- (9CI)
 (CA INDEX NAME)

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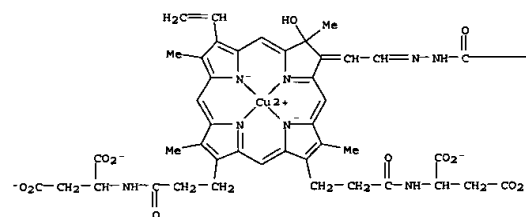
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-CO₂-• 8 H⁺

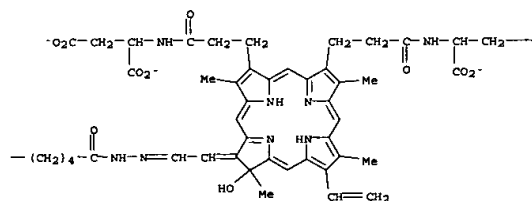
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 CN Cuprate(8-), [[hexanedioic acid
 [[2,18-bis[3-[[1,2-dicarboxyethyl]amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]ethylidene]hydrazidato
 [[2,18-bis[3-[[1,2-dicarboxyethyl]amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazidato](10-)]-, octahydrogen, (SP-4-2)- (9CI)
 (CA INDEX NAME)

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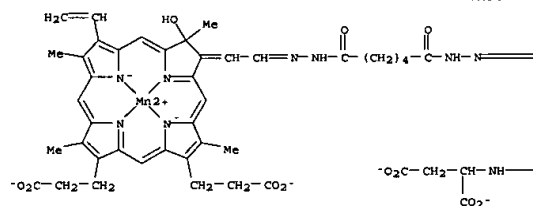
L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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-CO₂⁻● 8 H⁺

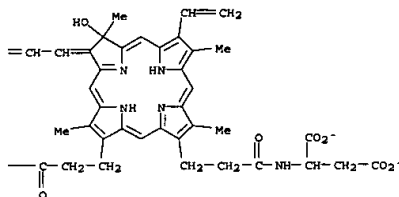
RN 157440-82-9 CAPLUS
 CN Manganate(6-), [7-[[[3-[[[2,18-bis[3-[(1,2-dicarboxyethyl)amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazino]-1,6-dioxohexyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato(8-)-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]-, hexahydrogen, (SP-4-2)- (9CI) (CA INDEX NAME)

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● 6 H⁺

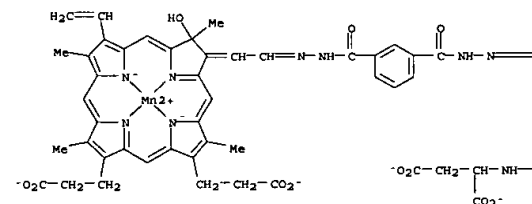
L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

PAGE 1-B



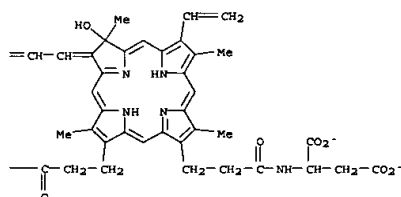
RN 157440-83-0 CAPLUS
 CN Manganate(6-), [7-[[[3-[[[2,18-bis[3-[(1,2-dicarboxyethyl)amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazino]carbonyl]benzoyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato(8-)-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]-, hexahydrogen, (SP-4-2)- (9CI) (CA INDEX NAME)

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● 6 H⁺

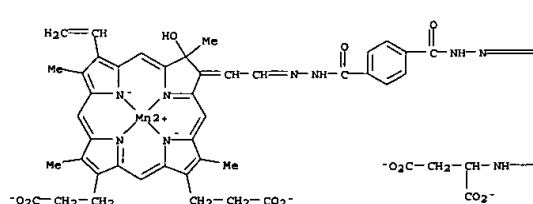
L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

PAGE 1-B



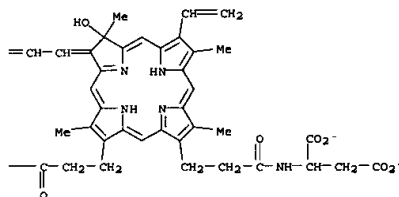
RN 157440-84-1 CAPLUS
 CN Manganate(6-), [7-[[[4-[[[2,18-bis[3-[(1,2-dicarboxyethyl)amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazino]carbonyl]benzoyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato(8-)-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]-, hexahydrogen, (SP-4-2)- (9CI) (CA INDEX NAME)

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● 6 H⁺

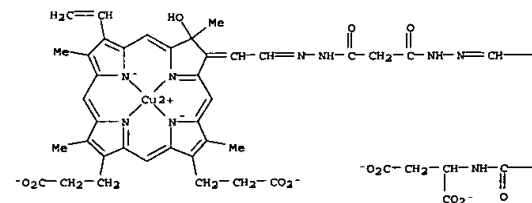
L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

PAGE 1-B



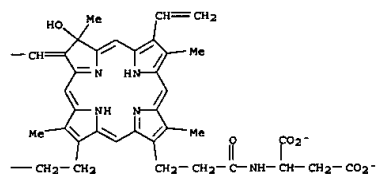
RN 157440-85-2 CAPLUS
 CN Cuprate(6-), [7-[[[3-[[[2,18-bis[3-[(1,2-dicarboxyethyl)amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazino]-1,3-dioxopropyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato(8-)-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]-, hexahydrogen, (SP-4-2)- (9CI) (CA INDEX NAME)

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● 6 H⁺

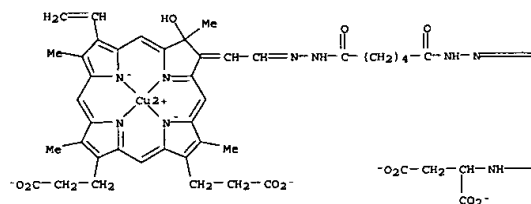
L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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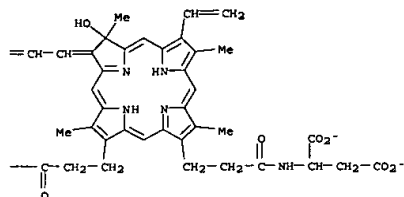
RN 157440-86-3 CAPLUS
 CN Cuprate(6-), [7-[[[6-[[[2,18-bis[3-[(1,2-dicarboxyethyl)amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazino]-1,6-dioxohexyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato(8-)-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]-, hexahydrogen, (SP-4-2)- (9CI) (CA INDEX NAME)

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● 6 H⁺

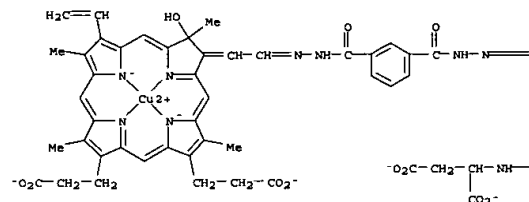
L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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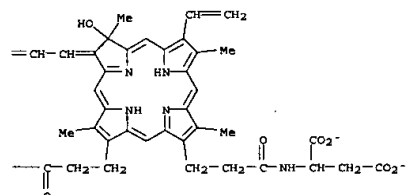
RN 157440-87-4 CAPLUS
 CN Cuprate(6-), [7-[[[3-[[[2,18-bis[3-[(1,2-dicarboxyethyl)amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazino]carbonyl]benzoyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato(8-)-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]-, hexahydrogen, (SP-4-2)- (9CI) (CA INDEX NAME)

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● 6 H⁺

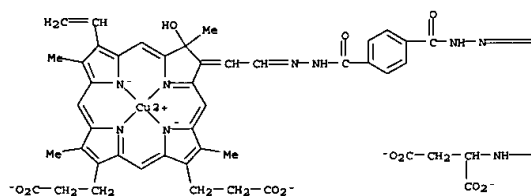
L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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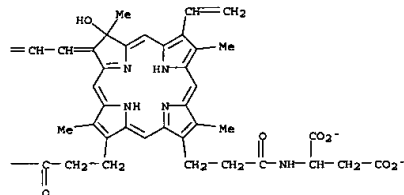
RN 157440-86-5 CAPLUS
 CN Cuprate(6-), [7-[[[4-[[[2,18-bis[3-[(1,2-dicarboxyethyl)amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazino]carbonyl]benzoyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato(8-)-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]-, hexahydrogen, (SP-4-2)- (9CI) (CA INDEX NAME)

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● 6 H⁺

L14 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

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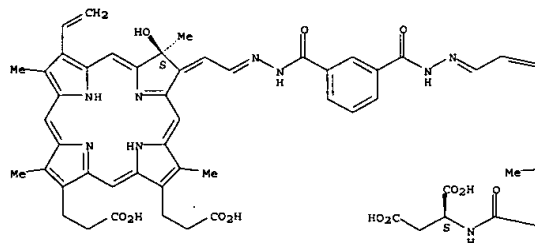
L14 ANSWER 24 OF 26 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 2
 ACCESSION NUMBER: 1994:293125 CAPLUS
 DOCUMENT NUMBER: 120:293125
 TITLE: Tumor-localizing fluorescent diagnostic agents
 without
 phototoxicity
 AUTHOR(S): Takemura, Takeshi; Nakajima, Susumu; Sakata, Isao
 CORPORATE SOURCE: Res. Inst. Electron. Sci., Hokkaido Univ., Sapporo,
 060, Japan
 SOURCE: Photochemistry and Photobiology (1994), 59(3), 366-70
 CODEN: PHCBAP; ISSN: 0031-8655
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB To develop tumor-localizing fluorescent diagnostic agents without
 phototoxicity, various heterodimers linked by some spacers between a
 chlorine deriv. and its Mn or Cu complex were synthesized. The
 representative agent of them was named HAT-D01 and has a mol. formula of
 m-phthalyl-[(13,17-bispropanoic acid-3-ethenyl-8-formylethylidene-7-
 hydroxy-2,7,12,18-tetramethyl-porphyrinate)-manganese (III)]-(3'-ethenyl-
 8'-formylethylidene-7'-hydroxy-2',7',12',18'-tetramethylporphine-13',17'-
 bispropanoyl aspartic acid)-bis-hydrazone.
 IT 154933-04-7 154933-05-8 155146-90-0, HAT-D 01
 RL: BIOL (Biological study)
 (fluorescent imaging with, of tumors)
 RN 154933-04-7 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropanoic acid,
 7-[[[3-[[[[(8S)-2,18-bis[3-[[[(1S)-
 1,2-dicarboxyethyl]amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,17-

trimethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazinol]carbonyl]benz
 oyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-
 tetramethyl-, (8S)-(9CI) (CA INDEX NAME)

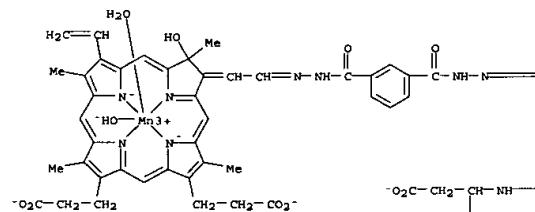
Absolute stereochemistry.
 Double bond geometry unknown.

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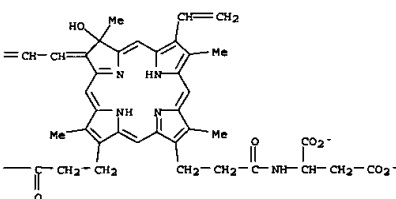
L14 ANSWER 24 OF 26 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 2
 (Continued)
 nzoyl]hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-
 tetramethyl-21H,23H-porphine-2,18-dipropanoato(8-)-
 .kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]hydroxy-, stereoisomer (9CI)
 (CA INDEX NAME)

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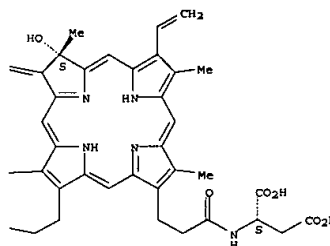
● 6 H⁺

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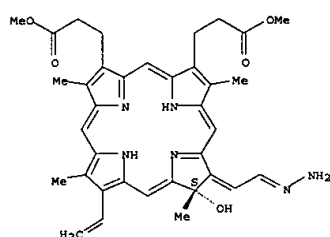
L14 ANSWER 24 OF 26 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 2
 (Continued)

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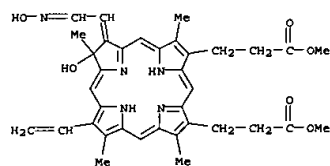
RN 154933-05-8 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropanoic acid,
 12-ethenyl-7-(hydrazonoethylidene)-
 7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl-, dimethyl ester, (8S)-(9CI)
 (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

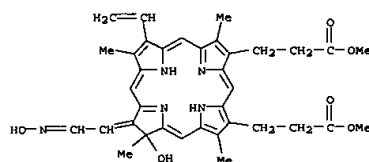


RN 155146-90-0 CAPLUS
 CN Manganese(6+), aqua[(8S)-7-[[[3-[[[[(8S)-2,18-bis[3-[[[(1S)-1,2-
 dicarboxyethyl]amino]-3-oxopropyl]-12-ethenyl-8-hydroxy-3,8,13,17-
 tetramethyl-21H,23H-porphin-7(8H)-ylidene]ethylidene]hydrazinol]carbonyl]be

L14 ANSWER 25 OF 26 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1994:579343 CAPLUS
 DOCUMENT NUMBER: 121:179343
 TITLE: Photosensitization of oximic analogs of
 protoporphyrin
 to the photodegradation of 2',3'-propylidene
 guanosine
 AUTHOR(S): Shan, D. X.; Suzuki, Mikio; Kai, Shigeo
 CORPORATE SOURCE: Pharm. Coll., Zhejiang Med. Univ., Hangzhou, 310006,
 Peop. Rep. China
 SOURCE: Yaoxue Xuebao (1994), 29(3), 180-4
 CODEN: YHHPAL; ISSN: 0513-4870
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Some oxime analogs of protoporphyrin were prepd. They all show max.
 absorption at 670 nm. Illumination at 2',3'-isopropylideneguanosine
 (IpGu) with a red light in the presence of oxime derivs. results in high
 photodegradn. of IpGu which is twice as large as that of hemetoporphyrin.
 IT 28383-51-9 157828-58-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. and photodegn. of isopropylideneguanosine in presence of)
 RN 28383-51-9 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropanoic acid,
 12-ethenyl-7,8-dihydro-8-hydroxy-7-
 [(2-hydroxyimino)ethylidene]-3,8,13,17-tetramethyl-, dimethyl ester (9CI)
 (CA INDEX NAME)



RN 157828-58-5 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropanoic acid,
 13-ethenyl-7,8-dihydro-7-hydroxy-8-
 [(hydroxyimino)ethylidene]-3,7,12,17-tetramethyl-, dimethyl ester (9CI)
 (CA INDEX NAME)

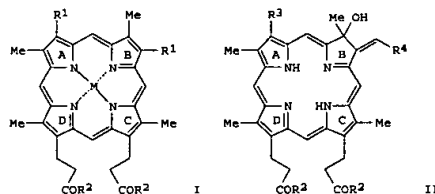


L14 ANSWER 25 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

L14 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1993:603241 CAPLUS
 DOCUMENT NUMBER: 119:203241
 TITLE: Preparation of porphyrin compounds as photosensitizers for photodynamic therapy (PDT)
 INVENTOR(S): Sakata, Isao; Nakajima, Susumu; Koshimizu, Koichi; Takada, Hiroyuki; Inui, Yasushi
 PATENT ASSIGNEE(S): Toyo Hakkai Kogyo Kk, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
 CODEN: JKKXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

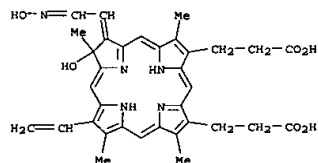
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05097857	A2	19930420	JP 1991-323597	19911004
JP 3191223	B2	20010723		

PRIORITY APPL. INFO.: JP 1991-323597 19911004
 OTHER SOURCE(S): MARPAT 119:203241
 GI



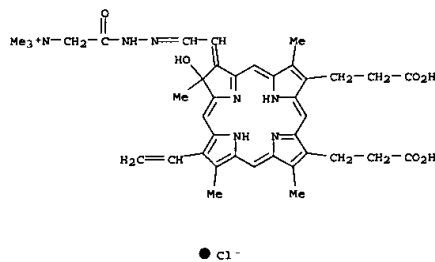
AB Porphyrin deriva. or their metal complexes [I; R1 = CH(OR)Me, wherein R = alkyl; R2 = residue derived by removing H from an amino acid; M = 2H, Ga, Zn, Pd, In, Sn] and porphyrin deriva. [II; R2 = OH, residue derived by removing H from an amino sugar or amino acid; R3 = CH:CH2, CH(OR)Me (wherein R = alkyl), CHO, C:HOH, CH2OH; R4 = CH:X, C(OH)OSO2Na, CH(SCH2CO2H)2, CH(OR)2, benzothiazolyl; wherein X = O, C(CN)2, SW, C(Y)2; wherein M = OH, O2CMe, NHE; wherein E = H, alkyl, COCSH4N, CONH2, CSNH2, CO2Me, COCH2NClMe2, C(NH2):NH; wherein Y = H, alkyl; 2 = NO2, COP, or YZ = CONHCONHCO] or their regio isomers in which the functional groups of the side chains in pyrrole ring A and B are exchanged with each other, useful for photodynamic therapy of cancers, are prepd. Thus, hydrobromination of protoporphyrin di-Me ester by 10% HBr in AcOH followed by etherification with hexyl alc., sapon. with 2 N KOH/EtOH, and acidification with 1 N aq.

L14 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)
 HCl gave 2,4-bis(1-hexyloxyethyl)deuteroporphyrin which was converted into dicyclohexylamine salt and then condensed with H-Asp(OMe)-OMe.HCl in the presence of 1-ethyl-2-(3-diethylaminopropyl)carbodiimide and MeCN-CHCl3 to give, after sapon. with 2 N KOH/EtOH, 40.6% (overall yield) I (R1 = 1-hexyloxyethyl, R2 = Asp-OH, M = 2H) (III). III in vitro inhibited .apprx.100% the proliferation of HGC-27 cells at 10-4, 10-5, and 10-6 M under the cold spot irradsn. with a halogen lamp PCL-SX va. 90, 35, and 20%, resp. without the irradsn. Approx. 40 I were prepd.
 IT 150582-63-1P 150582-65-3P 150582-66-4P 150582-69-7P 150582-70-0P 150582-71-1P 150582-72-2P 150582-73-3P 150582-75-5P 150582-76-6P 150582-88-0P
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of, as photosensitizer for cancer photodynamic therapy)
 RN 150582-63-1 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropanoic acid, 12-ethenyl-7,8-dihydro-8-hydroxy-7-[(hydroxyimino)ethylidene]-3,8,13,17-tetramethyl- (9CI) (CA INDEX NAME)

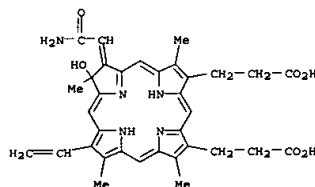


RN 150582-65-3 CAPLUS
 CN Ethanaminium, 2-[[[2,18-bis(2-carboxyethyl)-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl-21H,23H-porphine-7(8H)-ylidene]ethylidene]hydrazino]-N,N,N-trimethyl-2-oxo-, chloride (9CI) (CA INDEX NAME)

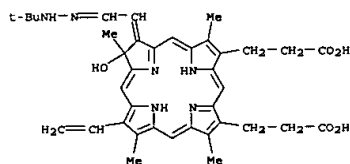
L14 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)



RN 150582-66-4 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropanoic acid, 7-(2-amino-2-oxoethylidene)-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl- (9CI) (CA INDEX NAME)

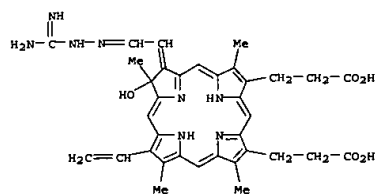


RN 150582-69-7 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropanoic acid, 7-[[[(1,1-dimethylethyl)hydrazono]ethylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl- (9CI) (CA INDEX NAME)

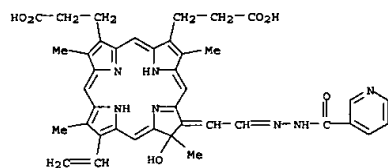


L14 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

RN 150582-70-0 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropionic acid,
 7-[[[aminoiminomethyl]hydrazono]et
 hylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl- (9CI)
 (CA INDEX NAME)



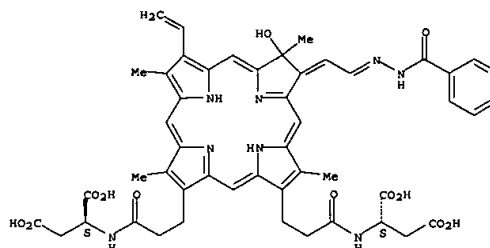
RN 150582-71-1 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropionic acid, 12-ethenyl-7,8-dihydro-8-hydroxy-
 3,8,13,17-tetramethyl-7-[[[3-pyridinylcarbonyl]hydrazono]ethylidene]-
 (9CI) (CA INDEX NAME)



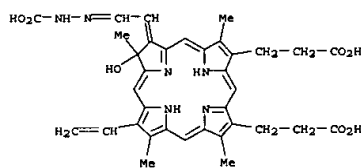
RN 150582-72-2 CAPLUS
 CN L-Aspartic acid, N,N'-[[[12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-
 tetramethyl-7-[[[3-pyridinylcarbonyl]hydrazono]ethylidene]-21H,23H-
 porphine-2,18-diyl]bis(1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

L14 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

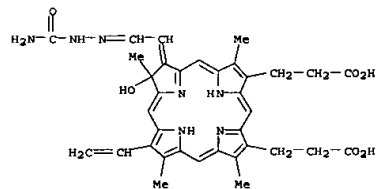


RN 150582-73-3 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropionic acid, 7-[(carboxyhydrazono)ethylidene]-
 12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl- (9CI) (CA INDEX
 NAME)

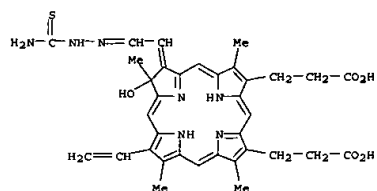


RN 150582-75-5 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropionic acid,
 7-[[[aminocarbonyl]hydrazono]ethyl
 idene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl- (9CI) (CA
 INDEX NAME)

L14 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)



RN 150582-76-6 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropionic acid,
 7-[[[aminoiminomethyl]hydrazono]et
 hylidene]-12-ethenyl-7,8-dihydro-8-hydroxy-3,8,13,17-tetramethyl- (9CI)
 (CA INDEX NAME)



RN 150582-88-0 CAPLUS
 CN 21H,23H-Porphine-2,18-dipropionic acid,
 7-[[[1,2-dideoxy-1-(hydroxyimino)-D-
 glucitol-2-yl]imino]-12-ethenyl-8-hydroxy-3,8,13,17-tetramethyl- (9CI)
 (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

L14 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2003 ACS (Continued)

